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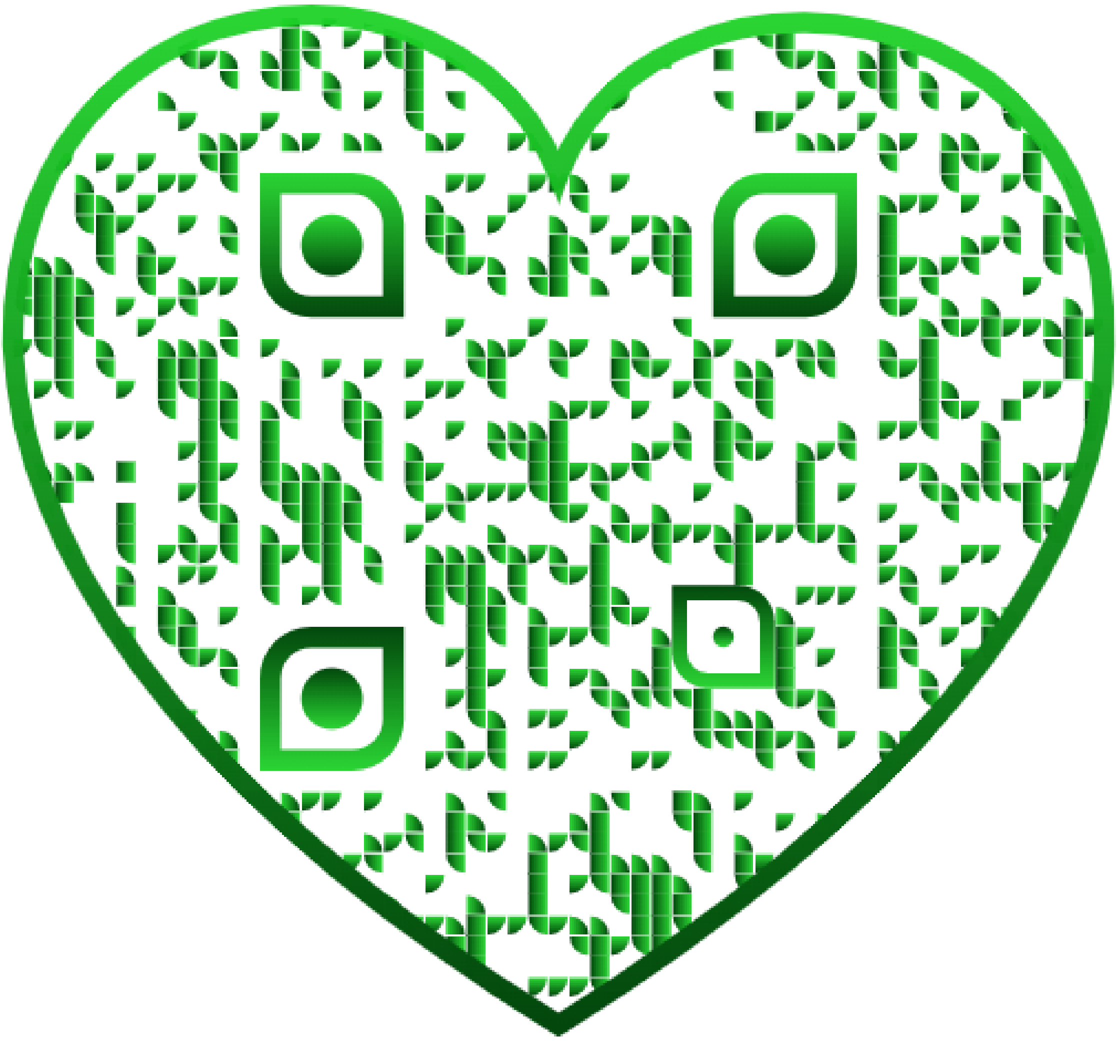

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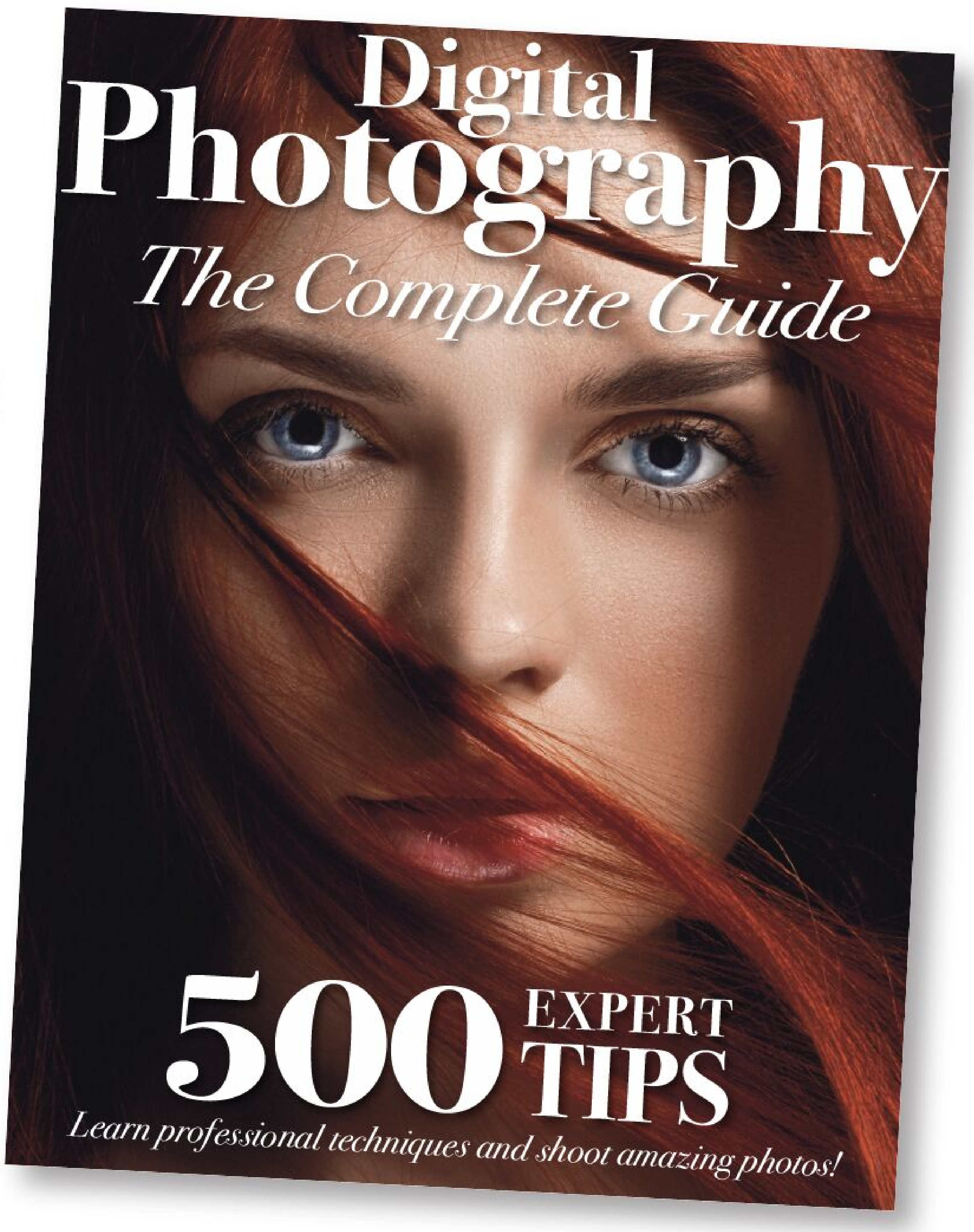
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Black & White Photography
For Beginners

Black & White Photography For Beginners is the first and only choice if you want to gain the knowledge you need to shoot images that can match the best. Black and white is a timeless medium and we show you how you can deliver professional results with our essential guides and tips for getting the most out of this dramatic and popular form of photography. If you love black and white, this guide is for you.

Papercut

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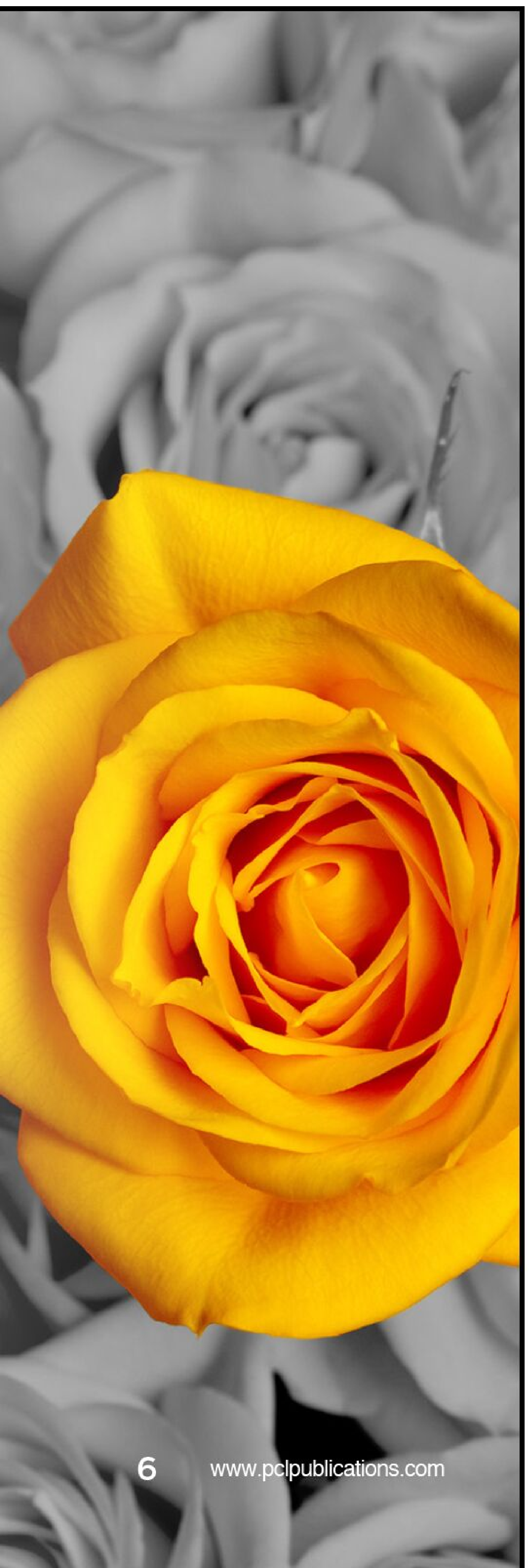
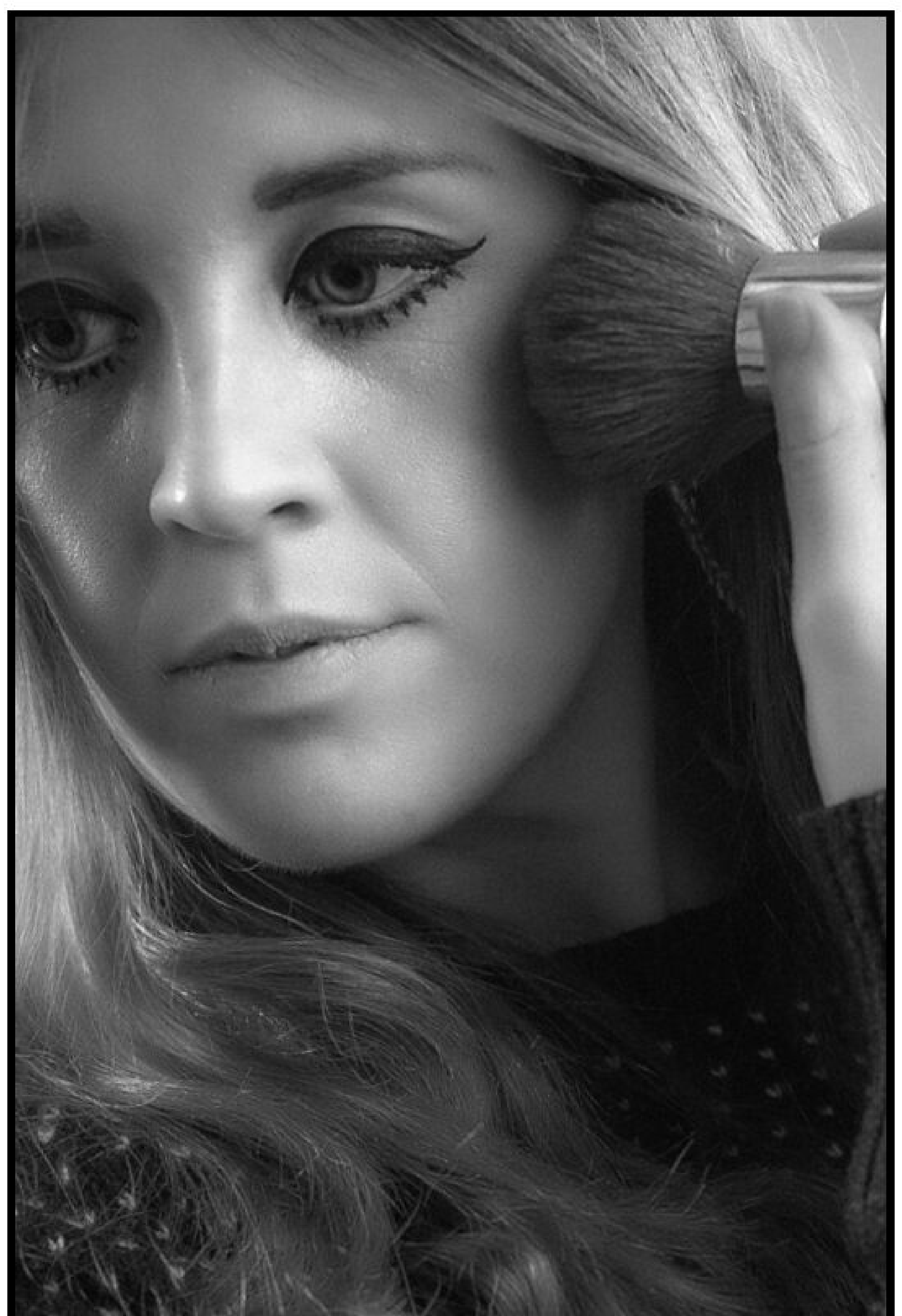
Nikon
AF-S NIKKOR 85mm 1:1.4G





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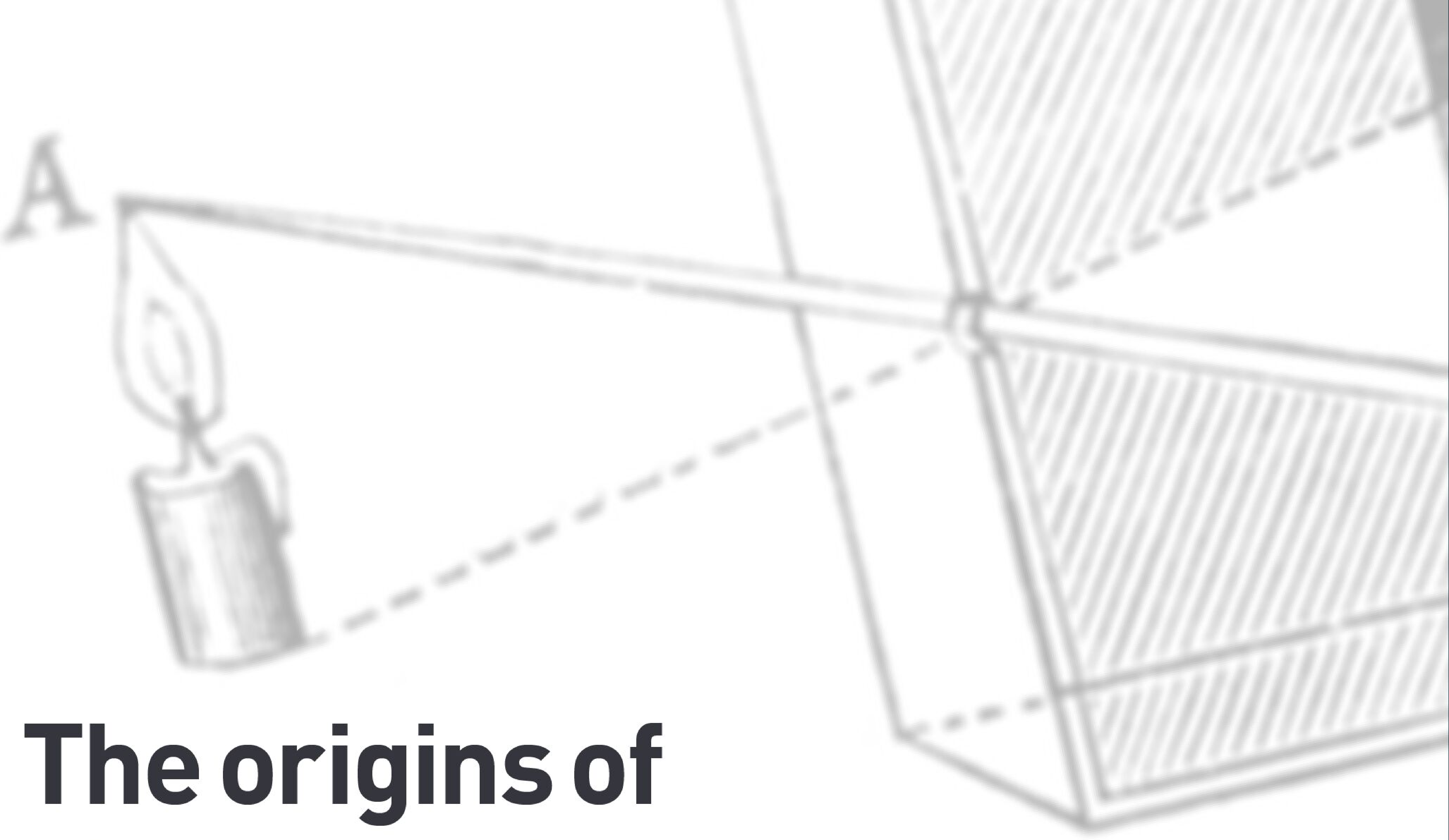
BLACK AND WHITE PHOTOGRAPHY

View from the window at Le Gras - believed to be the oldest surviving camera photograph, taken around 1826-1827.



The origins of photography

A SMALL HISTORY LESSON ABOUT HOW THE BLACK AND WHITE MEDIUM WAS CONCEIVED

You cannot talk about black and white photography without talking a little about the history of photography itself. The two are inextricably linked because all we had to begin with, at the dawn of the medium, was black and white. It goes without saying that the equipment and techniques we have today are a far cry from those early days when the pioneers of photography were experimenting with how to collect light, light-sensitive materials and equipment to capture and focus the image.

The story of black and white photography, although cited as beginning sometime in the 1800s, actually goes back much further in history to the days of Aristotle around 384-322 BC. Aristotle understood the principle of the camera obscura (dark chamber), although at the time there was no known method to 'fix' an image cast by the camera, and so create a permanent record.

From the earliest principles that brought the world the camera obscura, and the observable phenomena that certain substances were visibly altered by exposure to light, the course of photographic endeavour has been well documented and we owe those early pioneers a debt of thanks for bringing us our beloved world of photography.

The first recorded attempt to unite light captured on light-sensitive material is Thomas Wedgwood circa 1800. Although it appears the attempt to capture light via a camera obscura on treated white leather or paper was unsuccessful, it paved the way for Nicéphore Niépce in the mid 1820s. His attempt was very crude and the exposure took several days. His associate at the time was one Louis Daguerre, who went on to create what is generally held to be the first publicly announced system, the daguerreotype. Unlike the many days required by Niépce's process, a daguerreotype could be exposed in minutes, with much greater clarity in the final image on metal-based materials. Henry Fox Talbot was soon to compete with Daguerre's system through his own paper-based calotype negative and salt print process.

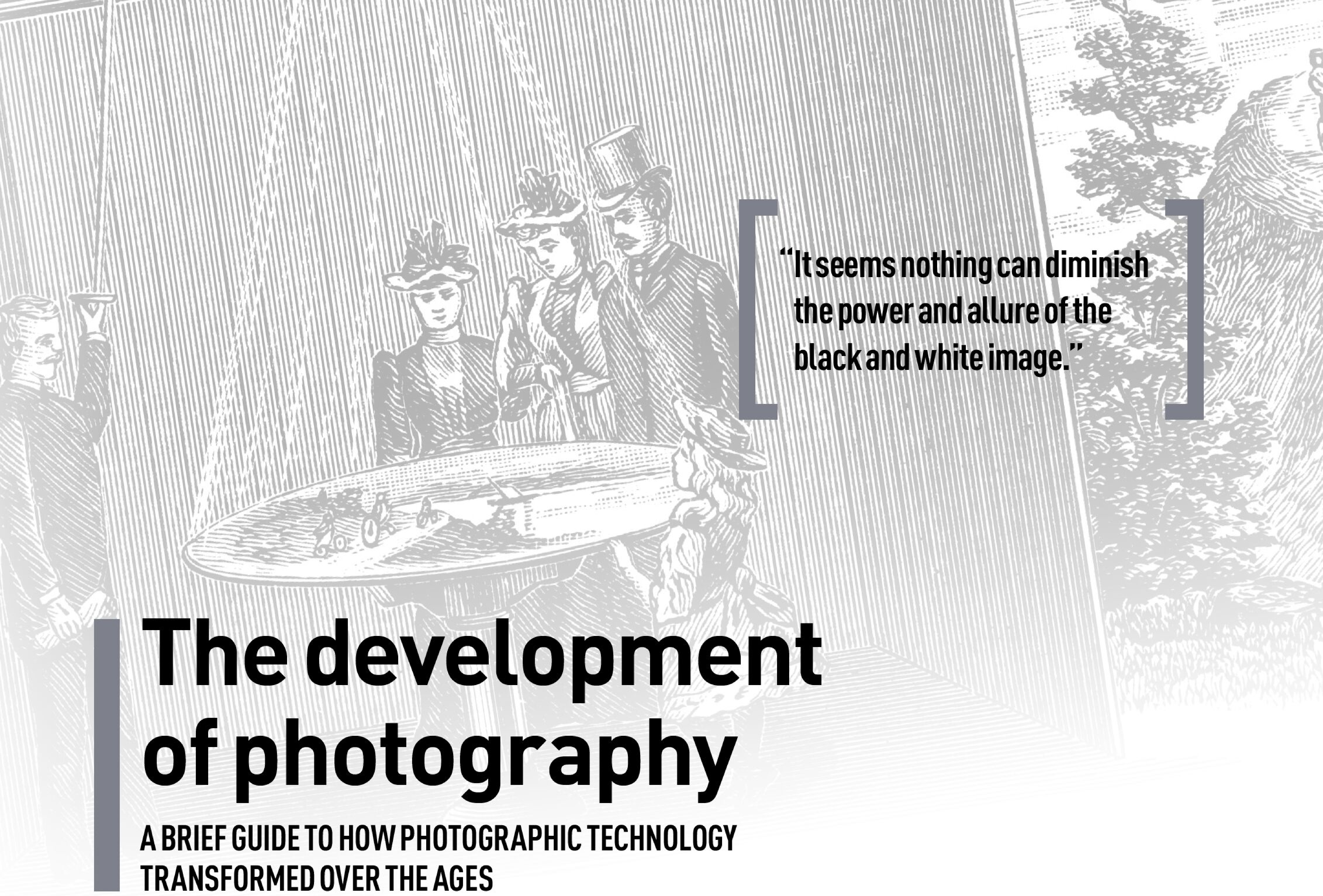
As the development of the processes continued and further innovations were made, camera exposures were reduced from days to hours, then to minutes, seconds, and eventually fractions of seconds. Black and white media became more and more accessible to the public, and the rest is history. ■

DAGUERREOTYPE

A French manufactured Susse Frères Daguerreotype camera, circa 1839.

Louis-Jaques-Mandé Daguerre, the creator of the first publicly announced photographic process, introduced worldwide in 1839.

> "You cannot talk about black and white photography without talking a little about the history of photography itself."



> “It seems nothing can diminish the power and allure of the black and white image.”

The development of photography

A BRIEF GUIDE TO HOW PHOTOGRAPHIC TECHNOLOGY TRANSFORMED OVER THE AGES

From its distant origins and development through the 1800s, right up to todays’ most modern digital cameras and software, the black and white image has left an indelible legacy. It seems nothing can diminish the power and allure of the black and white image. Indeed, it can be noted that some of the greatest and most iconic images ever captured, were done through the medium of black and white.

From a projected image appearing within a darkened room or box, to the daguerreotype, to gelatin-silver prints, to modern day advanced digital imaging, this whole technology needed a name. The term ‘photography’ is said to have been proposed by the scientist and noted astronomer Sir John Herschel. The word is derived from ‘photos’, meaning light, and ‘graphe’ meaning drawing. Hence ‘drawing with light’ was born.

At first, photography was regarded as a technological curiosity. A plaything for the lucky few. However, it very quickly became clear that photography was a unique method of capturing a moment of reality, removing it from the scene in which it was taken, and preserving it, much in the same way as an engraving or painting. A new form of communication was upon us.

In its earliest days, photography was limited by the processes and extremely long exposure times required to record static objects. Portrait sittings were a form of torture where the subject was seated and their head was clamped in order to make sure they did not move during the exposure. As the quality and speed of light-sensitive materials progressed, and exposure times were reduced to fractions of seconds, a popular form of photography emerged where subjects were captured in mid-air, jumping over a puddle, or down some steps.

In 1847, a new design of bellows camera by Sergei Levitsky made significant strides in improving the methods by which an image could be focused. It is generally held that his innovations had a major impact on camera design, a legacy that can still be seen today in the design of certain cameras. Levitsky is also notable for being forward-thinking in terms of retouching negatives and even using interchangeable decorative backgrounds in his shoots. He is even thought to have been the one who proposed the idea of using artificial lights to illuminate his subjects. Improved and refined over the years since its inception, photography saw a sea-change in its history around 1884 when George Eastman developed the dry-gel on paper and film systems, effectively rendering the photographic plate redundant. No longer did you need to carry around large, bulky equipment and boxes of photographic plates and harsh chemicals. When it hit the market in 1888, George Eastman’s Kodak camera was advertised with the slogan ‘you press the button, we do the rest’. Mass-market appeal was soon to follow with their next development. The new camera was called the ‘Brownie’ after a popular cartoon of the time and went on sale in 1900 for $1. The mass-market camera had been born with 150,000 sales in its first year. The public had a relatively easy and inexpensive way to experience photography for themselves. In 1901 the ‘Brownie 2’ went on sale. It produced larger photos and cost $2.

The continuing development of camera technology meant that, suddenly, many people were taking up the new art form and turning it into a business. Cameras were now also recording the realities of real-life world events. From the early days of photography, where camera crews recorded images from the American Civil War and the Crimea, to shots of Al Capone and the Hindenburg disaster, the camera was literally ‘life through a lens’. ■

The Brownie Flash III. A later development of the original Brownie design, which took 2 1/4 x 3 1/4 inch exposures on type 620 film with a close-up filter.

Kodak
I
B
LOCK
'KODET' LENS
Brownie Flash III
CAMERA
MADE IN ENGLAND BY KODAK LIMITED LOND

An example of an old bellows camera based on the work of photographic pioneer Sergei Levitsky.

> "...black and white photography didn't die off like the black and white TV; in fact it flourished."

Introduction to black and white photography

YOUR JOURNEY INTO BLACK AND WHITE PHOTOGRAPHY BEGINS HERE

See the world in black and white as we introduce you to this timeless medium. At the dawn of photography as we know it, when everything was fresh and new, you had no choice but to shoot in black and white. Exposing images onto glass or metal plates gave way to the film and chemical process. It wasn't until 1936 that Kodak gave the world colour photography. However, black and white photography didn't die off like the black and white TV; in fact it flourished.

Whichever way you look at it, colour distracts you from the heart of what should make a great photo. Things like texture, composition, form, lighting and good old storytelling can be swamped and made inconsequential by colour. It's not to say that colour is an invalid medium. Black and white photography can be seen as your interpretation of what is real, whereas colour can feel more like a record of reality. Shooting in mono is a medium that adapts very well to any kind of lighting situation. A shot taken on a cloudy day in colour feels dull; the same shot in mono feels moody. A colour image can be said to shout at you for attention, whilst a mono image speaks to you quietly in a more personal way. In the past, shooting in black and white was not seen as a limitation of the technology at hand, more a creative choice. The popularity of the medium today would suggest many still feel that way.

That may all sound a bit mystical, but in essence, many photographers would argue that black and white is probably the purest form of photography. We could fill an entire book with the intricacies of the black and white art first pioneered by great artists such as Ansel Adams, David Bailey, Richard Avedon, Man Ray and Cartier Bresson, but there are some simple tips that can help you on your way to discovering why black and photography is such a prized and creative visual medium. ■

Adams developed the Zone System as a way to determine proper exposure and adjust the contrast of the final print. The resulting clarity and depth characterised his photographs.

> “Shape defines how an object looks in its simplest form, as an outline or silhouette only.”

Black and white core concepts

BEGIN TO TRAIN YOURSELF TO ‘SEE’ IN BLACK AND WHITE

You would imagine that the starting point would be to grab your camera, set its functions to black and white mode and start shooting. Many photographers always shoot in colour, in order to maintain as much tonal variation in the Raw image as possible; it just gives you more data to play with when it comes to the conversion process. A key word in the last sentence was ‘Raw’. Always shoot in Raw format. You want to record as much scene data as you can without your camera trying to process the image for you. Although it might sound odd, you need to develop the ability to ‘see’ in black and white. A great visual aid is to shoot Raw, as we’ve said, but also to set your camera’s picture style to black and white. It displays a black and white image on your LCD screen, but all the colour data is still there.

In its most basic form, a photo in black and white is made up of several components. Texture is a key ingredient; black and white loves texture. Harsh midday sun knocks everything flat, but the light glancing across a scene at sunrise or sunset makes texture pop out of the image.

Tonal contrast is another important consideration. A flat image with very little contrast will not necessarily convert into a great black and white shot without some serious post-processing; although in some cases, low contrast images can be very visually appealing if done well.

Shape defines how an object looks in its simplest form, as an outline or silhouette only. Images based on shape alone can be graphically intense. Form shows how something has depth and dimension. How an object is lit and casts shadows within its environment is the key to showing its form.

So, we have introduced you to some of the core concepts of black and white. Now, let’s explore it in more detail. The following pages will guide you through the rich, creative techniques that will enable you to explore and enjoy the world of black and white. ■

YOUR ESSENTIAL GEAR GUIDE

CHOOSING WHAT GEAR IS BEST FOR YOU MAY BE DAUNTING BUT WE CAN HELP

Choosing a camera and lens for landscape or portrait photography may seem daunting at first because there is so much choice out there. Manufacturers inundate us with features and gadgets that they tell us make their camera so much better than everyone else's. The truth is, if you strip away all the marketing ploys and technobabble, there is a wealth of choice available for every budget and skill level.

The trick is cutting through all the hype. With a little research and keeping a budget in mind, there are some great camera systems waiting for you. So dive in and begin your photographic journey. The next few pages will give the low-down on the various camera systems out there. Here are some of the things you need to know. ■

Cameras and lenses for landscapes

AN OVERVIEW OF SOME CAMERA SYSTEMS AND LENS TYPES

> "...a good wide-angle prime lens starts at around 14mm, capturing 114° field of view."

Advanced compact

Advanced compacts are designed for more experienced photographers, and offer superior photographic versatility and quality, as well as advanced creative features such as manual exposure controls, manual focusing, optical viewfinders and external flash connections. They are considerably more expensive than other types of compact, with prices ranging from around £300 to over £500. There are relatively few models in this category, with examples including the Olympus XZ-2, the Panasonic LX5 and the Canon PowerShot G15. There is an even more rarefied category that has appeared more recently of advanced compacts with larger sensors. Notable examples include the Sony RX1, the Fujifilm X series and the Canon G1 X Mk2. Prices range from around £500 to well over £2000.

Super-zoom

Super-zoom cameras used to be called "bridge cameras", since they were seen as halfway between compact cameras and DSLRs, but they have been falling out of favour over the past few years as zoom compacts and CSCs encroach ever further into their traditional territory. Nonetheless there are still a number of super-zooms on the market, and most of them are very capable cameras. They are usually quite large, with SLR-style bodies including big hand grips and electronic viewfinders. All offer powerful zoom lenses, some as much as 50x zoom, and usually include optical image stabilisation. Most also feature advanced HD video recording, often with stereo audio, and some also include advanced photographic features such as manual exposure and flash hot-shoes. Prices start at around £170, going up to nearly £400 for the more advanced models.

Compact system cameras

Compact system cameras (CSC) have interchangeable lenses, allowing photographers to choose a particular lens for a particular task, and also have a range of other accessories such as flashguns. The first compact system camera was the Panasonic Lumix G1, launched in 2008. They offer most of the versatility and image quality of digital SLRs, but in a smaller, lighter and in most cases less expensive package. They are a good choice for the hobby photographer who wants to extend their range, but who doesn't want to be dragging a heavy bag of full-sized lenses around. There is a wide variation in quality and capability between the various brands and models though, and prices range from less than £300 to over £1,200. Some ranges have only released a few extra lenses as yet, so it pays to do some homework and read product reviews before making your choice.

LUMIX
LEICA
POWER O.I.S.
DC VARIO-SUMMICRON 1:2.0-3.3/5.1-19.2 ASPH.

FUJIFILM
SUPER EBC FUJINON LENS
50x
50x ZOOM f=4.3-215 1:2.9-6.5

SAMSUNG
SAMSUNG LENS
i-Function
ED Ø40.5 II 20-50mm 1:3.5-5.6

CANON ZOOM LENS EF-S 10-22mm 1:3.5-4.5 USM
ULTRASONIC
10 12 14 17 20 22
EFS 10-22mm

The Canon EFS 10-22mm f/3.5-4.5 is a well-regarded wide angle lens for their cropped sensor range of DSLR's. It is equivalent to a 16-35mm full-frame lens.

Nikon 1 NIKKOR
10

Pancake lenses are designed to work with compact system cameras. This Nikkor 10mm lens is for the Nikon 1 V3 series camera. It is equivalent to a 27mm full-frame lens.

SIGMA
10-20mm 1:3.5 DC HSM
20 17 14 12 10

The Sigma 10-20mm f/3.5 wide angle zoom lens comes in both Canon and Nikon fit. This lens is equivalent to a 16-32mm full frame lens.

Digital SLR

The first digital SLRs (DSLRs) were introduced in the late 1990s, and were based on earlier film cameras. They have interchangeable lenses, and most DSLRs can use the same lenses as their older film-based predecessors with specialist lenses available for particular tasks. SLR systems are the choice of most serious amateur and professional photographers, and most offer superb image quality. Most DSLRs use a sensor size called "APS-C" but a few top-end cameras use larger "full-frame" sensors the size of a 35mm film frame. Prices start from about £400 for an entry-level APS-C model with a standard lens, while a top professional full-frame model such as the Canon 1DX costs £5,000 just for the camera body!

Canon
EOS 100D
CANON ZOOM LENS EF-S 18-55mm 1:3.5-5.6 IS STM
Φ58mm

Lenses and the landscape

It is an accepted fact that if there is one lens that is inextricably linked to landscape photography, it is the wide-angle lens. It is often said that the lens influences the shot, not the camera. That is particularly true of the wide-angle lens in landscape photography. As the name implies, a wide-angle lens captures a very wide field of view. This is ideal for capturing the broad expanse of the scene the photographer is in. It also draws in the viewer of the final image in ways that a zoomed narrow-angle image does not. Good wide-angle lenses are also sharp and capture great detail.

With the advent of digital cameras and their various sensor systems, pinning down what a wide-angle lens is can be tricky. If we stick with full-frame photography (a sensor size of 36x24mm to match the old film negative size), then a good wide-angle prime lens starts at around 14mm, capturing 114° field of view, with a versatile wide-angle zoom lens giving you a range of 16-35mm, capturing around 98° field of view at the wide end. However, a lot of camera systems use different sensor sizes and this means you have to bear in mind what is known as the 'crop factor'.

What this means is that a 16-35mm lens designed to work on a 36x24mm full-frame sensor will project an image that is too large for an APS-C camera with a sensor size of just 22.2x14.8mm (a crop factor of 1.6). The APS-C sensor is capturing image data from a smaller area; the remaining image has been 'cropped' by the smaller sensor. The 16-35mm lens will appear to work as if it were a 25.6x56mm lens. The same lens on a micro four thirds camera would appear to be a 29.4x64.6mm lens. Because of lens mount systems, there are only a few lenses that can be used on different camera types. For instance, you can mount a Canon full-frame EF lens on one of their APS-C DSLR cameras, but you cannot mount a Canon APS-C EFs lens on a Canon full-frame camera.

If purchasing a compact camera with a non-removable lens, your choices for shooting wide-angle may be limited. A lot of compacts focus more on their zoom capabilities rather than their wide-angle ability. Most compact cameras offer no more than about a 28mm equivalent wide-angle. Image quality is also a factor, as the lenses on compact cameras are tiny in comparison to their DSLR counterparts, and this limits the maximum quality you can glean from the camera. It's not until you move up to the Compact System Camera bracket that you are able to swap lenses from a range that offer so-called pancake lenses around the equivalent 20mm mark as well as telephoto lenses. The general rule for landscapes is: wider is better.

The resolution of the sensor is an important aspect to remember when choosing your camera and lens setup. If you are only going to be posting images online at modest resolutions, you can easily use a 12MP camera and get great results. If you are more likely to be producing images for print and large format digital output, then you are going to be looking for cameras that can produce at least 21MP images or more. ■

Cameras and lenses for portraits

AN OVERVIEW OF SOME PREFERRED CAMERA SYSTEMS AND LENS TYPES

Most of the cameras mentioned on the previous pages can be used for portrait work. To be honest, if you are always going to be shooting in natural light conditions and don't require large apertures and high ISO capability, then even the cheapest Compact System Camera will produce acceptable results. As you grow in confidence and experience as a portrait photographer, however, you may find that your once do-it-all compact camera may be lacking in certain abilities, and that non-interchangeable lens is limiting your creative choices. You'll feel like you've outgrown your camera and need to step it up. This is where the Digital SLR can help.

There are a number of major manufacturers such as Sony, Pentax, Olympus, Nikon and Canon. They produce a range of crop-sensor and full-frame DSLRs to suit every skill level and budget. It's fair to say that Canon and Nikon are the major players in this market; but when all is said and done, it is actually the lenses available for a camera system that will decide if it stands or falls. Also consider that camera bodies come and go, lenses stick around for much longer. This is as likely a reason for Canon and Nikon dominating the market as the choice of camera bodies. Both have a vast range of prime (fixed focal-length) and zoom lenses, as well as specialist lenses such as tilt-shift, macro and super-telephoto.

So let's assume that Canon or Nikon will be the two main contenders for your portrait photography equipment. The main question is: 'How pro do you go?' or 'How low do you go?' By pro, we mean getting your hands on some top-level equipment. You will need deep pockets for this, be in no doubt.

In the Nikon pro corner, camera bodies such as the D810 **[1]** weigh in at £2,300 for a 36MP DSLR, and their flagship D4s costs £4,500 for a full-frame 16 Megapixel camera. Canon offer you the full-frame EOS 5D Mark III with 22MP **[2]** at a cost of around £1,800. Its big brother, the EOS 5Ds has a whopping 50MP sensor and a price tag of £3,000. Canon's flagship is the EOS 1DX pro-body camera **[3]**. It is only 18MP but it is one of the go-to cameras for serious photographers and sports shooters, boasting an incredible 12fps and a £5,000 price tag. All of these cameras are packed with technology and offer superb image quality, if you can afford it.

If that seems a little too rich for your blood, then consider more entry levels DSLRs. There are plenty to choose from. From Nikon we have the D7100 **[4]**, a 24MP all-rounder costing £750. Also consider the very cost-effective D3200 **[5]**, a 24MP camera which is £350 with an 18-55mm kit lens. Canon's offerings in this area include the EOS 100D; an 18MP camera billed as the world's smallest DSLR, it has a small price at just £350 with a kit lens. Further up the scale is the EOS 70D, a 20MP camera with a huge amount of features ideal for the enthusiast at £780 **[6]**.

The lenses required for portrait work, like landscapes, are generally fairly specific. Where a short focal-length wide-angle is much sought after for landscapes, a longer prime lens is the order of the day for great

> "...consider that camera bodies come and go, lenses stick around for much longer."

Nikon
D3200
AF-S DX NIKKOR 18-55mm 1:3.5-5.6G VR

5

Nikon
D7100

4

Canon
EOS 70D
CANON ZOOM LENS EF-S 18-135mm 1:3.5-5.6 IS STM

6

7

CANON LENS EF 85mm 1:1.2 L II USM
85mm

8

CANON LENS EF 50mm 1:1.2 L USM
50mm

9

Nikon
AF-S NIKKOR 50mm 1:1.8G

10

Nikon
AF-S NIKKOR 85mm 1:1.4G

portraits. Lenses around the 17mm - 24mm equivalent mark are fine for environmental portraits where you are showing your subject amongst their surroundings, but if you used that focal-length close-up for a head and shoulders photo, there would be severe distortion of the facial features, the nose would appear larger in relation to the rest of the face and would not be flattering to the subject.

For more intimate portraits a lens with a focal-length of at least 50mm is required. Even at 50mm, there will be some distortion if you get in very close. To reduce distortion further, you need a lens of 85mm, 100mm, even 135mm and 200mm. Prime lenses tend to be less expensive than their zoom-lens siblings; they also benefit from wider apertures, perfect for isolating your subject against a distracting background. By using a large aperture of f/2.8 to f/1.4, your backgrounds will be soft and out of focus, so your attention is centred on your subject. As with all things, prime lenses vary in price. For example, a professional Canon 85mm f/1.4 lens **[7]** can be upwards of £1,800, but there is a more modest 85mm equivalent using cheaper build materials that only costs £250. The Canon pro series 50mm f/1.2 lens is £1,000 **[8]**, but its standard f/1.8 counterpart is only £100. Image quality may differ, but so does the difference in price. The Nikon AF-S 50mm f/1.8 lens is a very reasonable £130 **[9]** with great image quality and its 85mm sibling is £340 **[10]**. It's something you'll have to weigh up when it comes to purchase time.

It's not to say that zoom-lenses are a complete no-go. A good Nikon 55-300mm f/4.5 zoom will only set you back £260. Choose a compatible Tamron 18-200mm f/3.5 lens and you are only looking at £120. Photographers will tell you that a fixed focal-length prime lens is better because it motivates you to have to move around to get different views, but a good zoom lens is great for instant reframing and cropping of your shot. It comes down to your personal financial and creative preference. ■

Keep things stable with a good tripod

ONE OF THOSE ESSENTIAL ADDITIONS TO YOUR GEAR LIST

If you want to take better photographs, the single most useful accessory you can buy is a good quality tripod. By using a tripod you can completely eliminate camera shake, the number one cause of unsatisfactory photos. A tripod is also essential when using long exposures, powerful telephoto lenses or when shooting in low light conditions.

There are many different makes and types of tripod, from cheap budget models costing under £15 up to professional-grade tripods made of carbon fibre and magnesium alloy which cost hundreds of pounds. They come in all sizes too, from pocket-sized mini-tripods suitable for small compact cameras, to heavy studio tripods mounted on castors. The type that you should buy depends on how much you want to spend and what sort of photography you're going to use it for.

Key factors when choosing a tripod are rigidity and carrying weight. The tripod you choose has to be able to support the weight of your camera and hold it perfectly still. Some cheaper tripods with plastic heads and thin aluminium legs are too 'bouncy' to be used with anything heavier than a compact or light superzoom. Set the tripod up and press down on the top of it. If it flexes by more than a few millimetres it's not going to be stiff enough to support a heavy camera. ■

> "They come in all sizes too, from pocket-sized mini-tripods suitable for small compact cameras, to heavy studio tripods mounted on castors."

Pocket tripods

These are miniature tripods designed for small compact cameras, and are ideal for table-top use or for positioning your camera for a self-timer group shot. They're small enough to slip into a jacket pocket or into your camera pouch. There are several different types, including ones with telescopic legs, ball or pan-tilt heads, and even flexible legs. One unique and extremely versatile design is the Joby Gorillapod, which can grip onto almost any object or work as a tripod.

Travel tripods

Travel tripods are designed for general use where low weight and portability is an important factor. They are made of lightweight materials, usually aluminium or carbon fibre, and are suitable for most types of camera from compacts up to mid-range DSLRs, although not with large telephoto lenses.

Velbon Sherpa 555R

Budget tripods

There are many cheap tripods on the market, many costing less than £20. There are some very good ones, such as this Velbon DF-41, but many lack the rigidity to support heavier cameras and lenses.

Velbon
DF-41

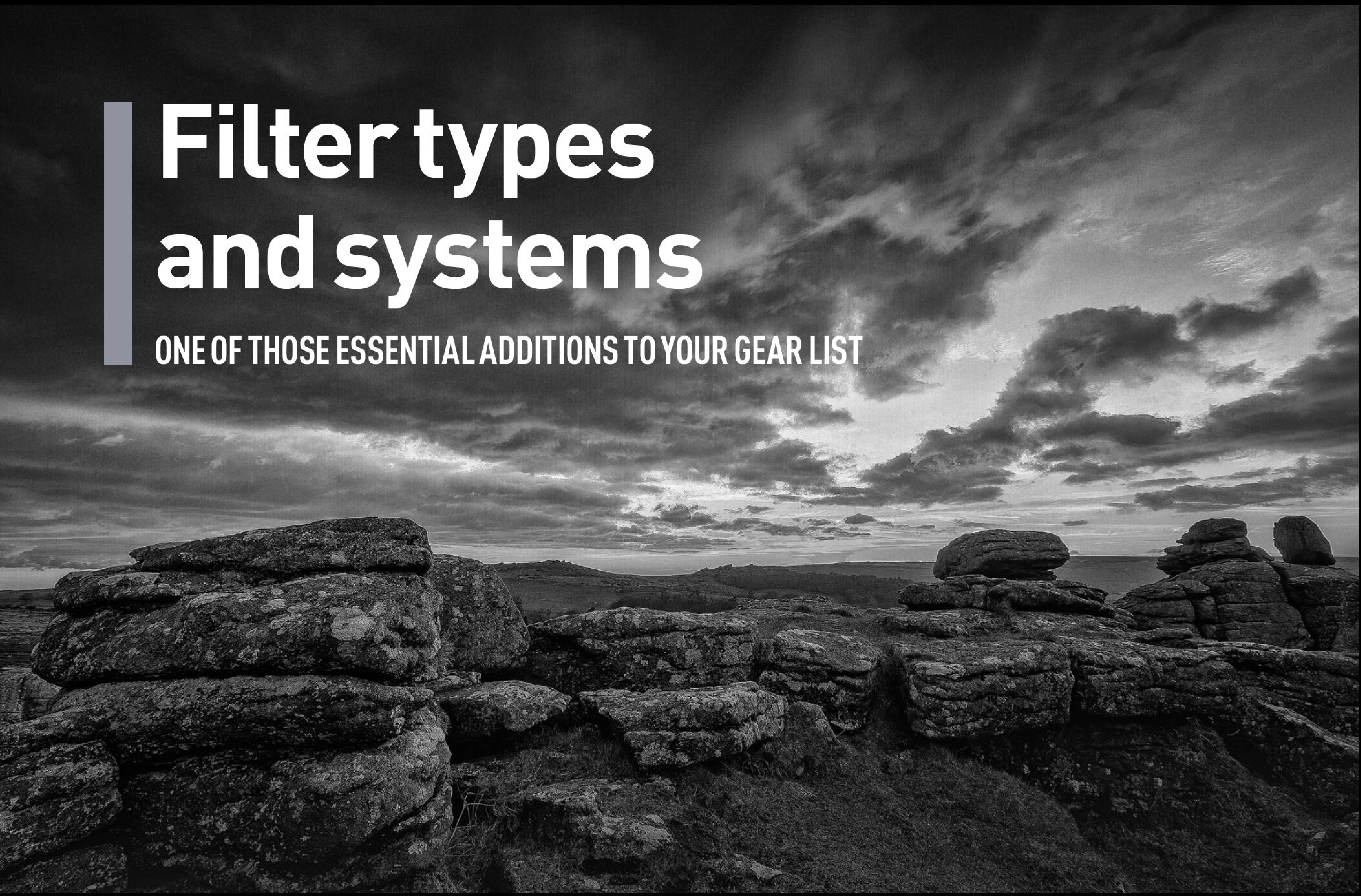
Professional-grade tripods

Top quality tripods are made from high-tech materials like carbon or basalt fibre, with magnesium alloy fittings and superior workmanship. They offer the best rigidity and support for even the heaviest cameras and lenses, but they are very expensive. The Gitzo Mountaineer Series 1 seen here costs over £800.

Monopods

If carrying a tripod around is inconvenient, a good alternative is a monopod, essentially a single telescopic support leg with a camera mounting on the top. Obviously they don't provide the stand-alone support of a tripod, but they can be a big help in reducing camera shake. They are also handy for shooting in confined positions where a tripod won't fit, such as in a crowded space.

Velbon RUP-L43



Filter types and systems

ONE OF THOSE ESSENTIAL ADDITIONS TO YOUR GEAR LIST

While it's quick and easy to add filters to an image during editing, you can often get better results by adding filters to the camera before taking the photo.

Filters have been an essential part of photography since its very beginnings. Used creatively, they can improve a hard-to-capture scene, add an extra artistic element to an image, or just provide a bit of fun. Modern digital photo editing has provided an almost too easy method to add filter effects to an image after it has been taken; but some effects are better when applied by actual physical filters fitted to the camera when the photo is taken, and this is particularly true with black and white photography. Let's take a look at some of the different types of filter, and how they can help to improve your photos.

Filter systems

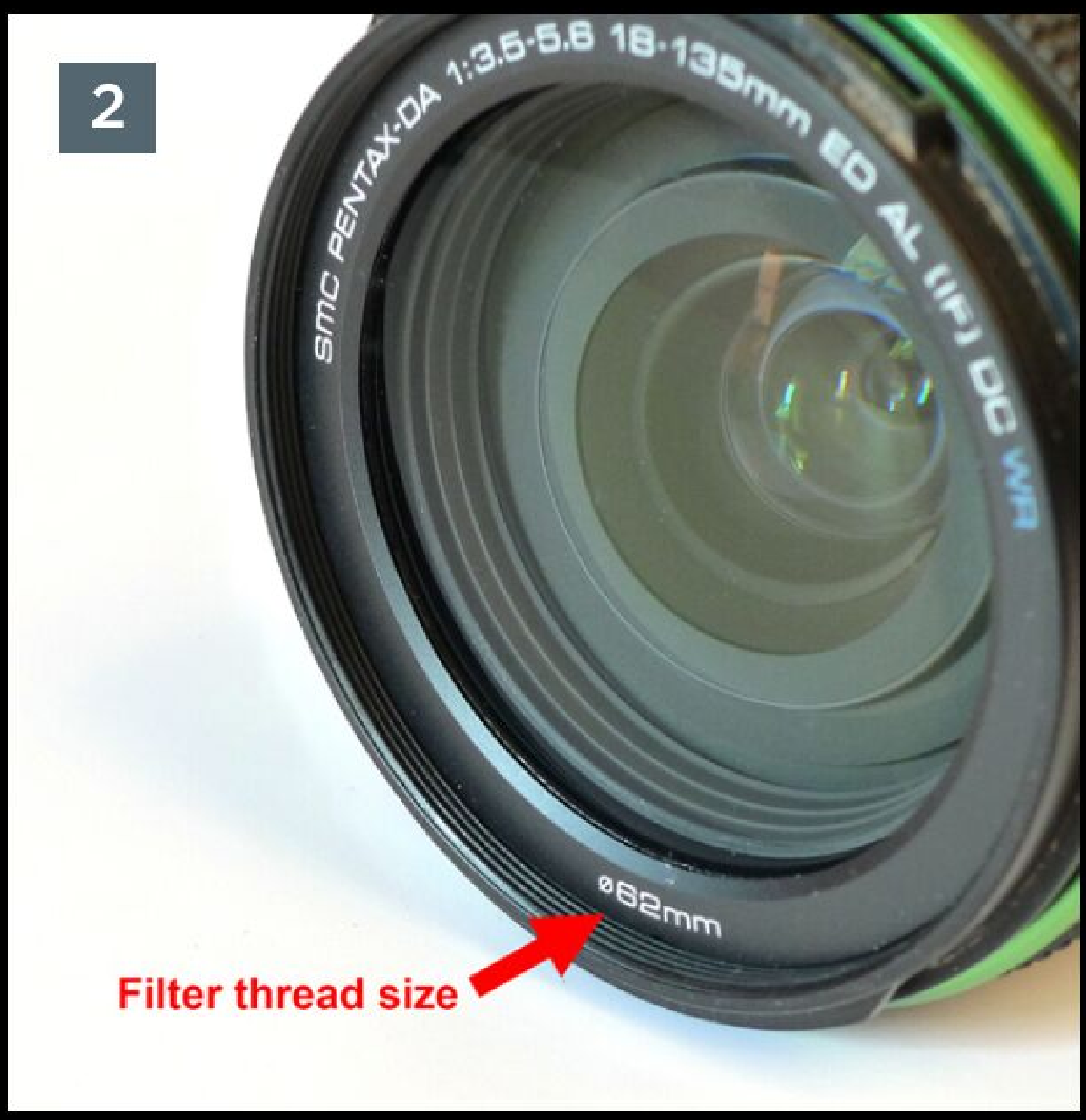
There are two main types of camera-mounted photographic filter: screw-on circular filters that are attached directly to the front of the lens; and Cokin-type square acetate filters that are mounted in a special holder.

Circular screw-on filters

Popular with professionals, circular filters have advantages and disadvantages **[1]**.

1

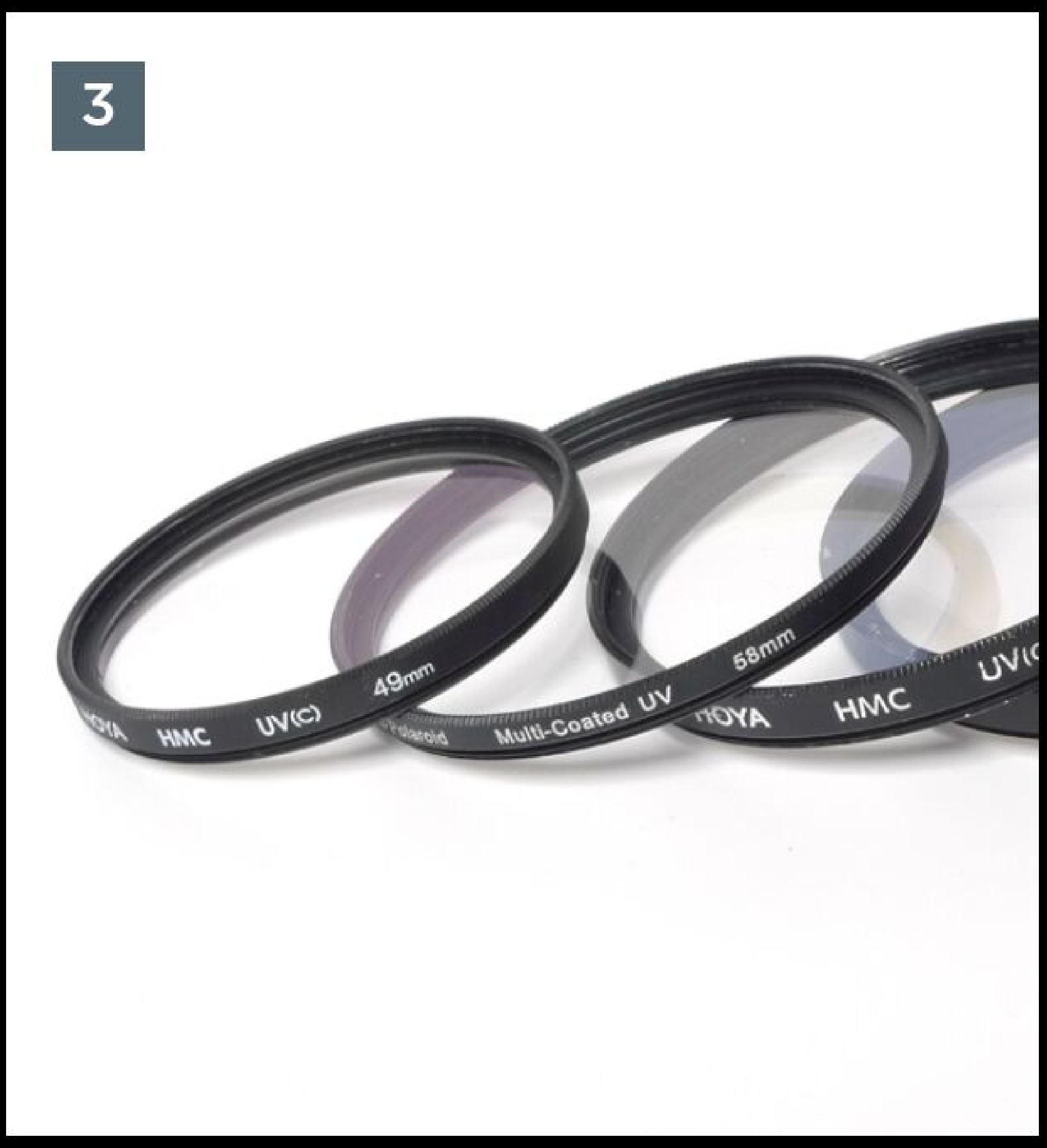
2



All DSLR cameras, most compact system cameras, and many high-end compact cameras have the ability to mount filters. If you're not sure about your camera, take a look at the front of the lens. If you can see a screw thread around the inside of the front edge of the lens barrel then you can use filters, because it is to this thread that they are attached. To find out what size of filter you should use, look for a number next to the standard symbol for diameter, a circle with a line through it, usually marked on the front ring of the lens bezel. This is the filter thread diameter in millimetres **[2]**.

Many photographers will keep what is commonly called a "UV" or "Skylight" filter permanently attached to the front of all of their lenses. Photographic film is particularly sensitive to ultraviolet light, so a UV filter is intended to prevent overexposure by blocking the higher levels of ultraviolet light present at higher altitudes. Since it is completely transparent to all other wavelengths it will have no other effect on your pictures, especially since digital cameras don't suffer from excess UV sensitivity; but the UV filter does also serve the extremely useful role of protecting the delicate surface of your lens's front element from accidental damage and greasy fingers **[3]**.

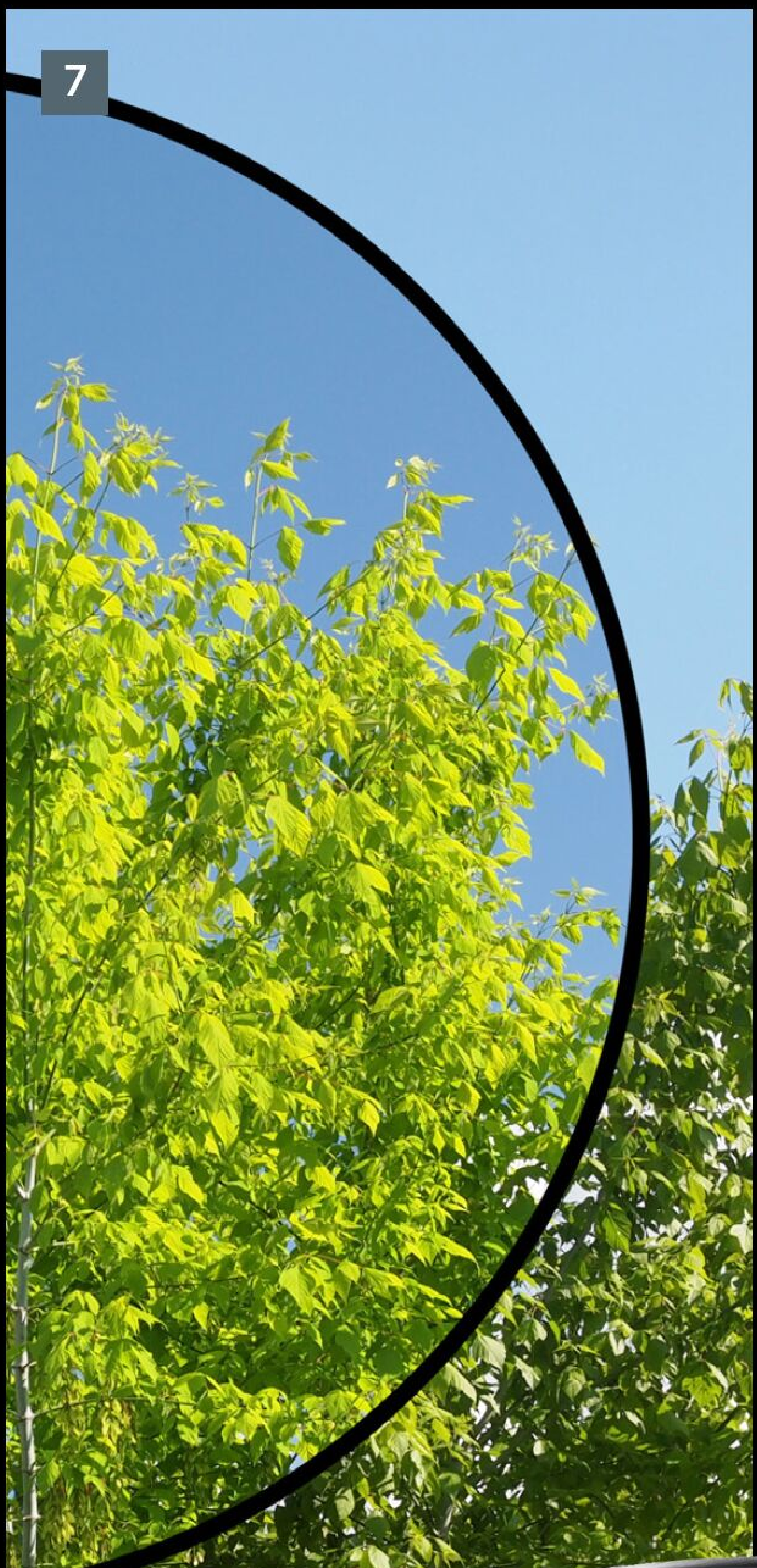
3



5

PENTAX
HOYA HMC UV(C)
HOYA

7



4

6

UV 52mm FILTER

Circular filters

Circular filters have some advantages, but there are also a number of drawbacks.

Good quality circular filters are usually made out of distortion-free optical quality glass, and have similar coatings to the front element of your lens, reducing problems such as lens flare. They are manufactured to a high standard, and any colour tints will be optically pure and even.

Because they attach directly to the lens without needing an adaptor, individual filters are less bulky and cumbersome than a complex acetate filter-holder system; and you can screw several same-size filters together, further reducing the space they take up in your kit bag **[4]**.

The downside of circular filters is that they are expensive, with a simple UV filter costing between £20 and £50 depending on size, and some of the more exotic types of filters costing several hundred pounds each. The problem is that different lenses have different diameter filter threads, so if you have a system camera and a selection of lenses you will probably end up buying the same filter in several different sizes, which can become very expensive indeed. Buying just basic UV and polariser filters for all of the lenses in an average enthusiast's kit can represent an investment of hundreds of pounds. Add a few neutral density and colour correction filters and you're not going to get much change out of a grand **[5]**.

Another problem with circular filters is vignetting, especially on wide angle lenses. It is possible to stack more than one filter on a lens to produce multiple effects; but if you add more than one to most wide-angle lenses, the filter rings will impinge on the corners of the frame.

Types of circular filter

There are several types of circular filter that any photography enthusiast should have in their kit bag.

UV or Skylight filter

As we've already discussed, UV filters are mainly used to protect the front element of your lens, but they also cut down haze caused by UV when shooting with film. Buy one for every lens in your kit and leave them on there **[6]**.

Circular polariser

A circular polariser is used to reduce reflected glare and improve the contrast and saturation of colours. It's used more in colour photography than black and white. Buy one for your landscape lens **[7]**.

8

HOYA
PROND100

Neutral density filter

Neutral density filters are used to reduce the light entering the camera. They're useful for many reasons, such as using wide apertures on long-exposure shots, or reducing sun glare **[8]**.

Colour correction filter

These are the filters you'll use most often in black and white photography, to lighten or darken the shade of various tones in the final image **[9]**. ■

9

HOYA HMC 62mm

The Cokin creative filter system

A COMPLETE FILTER SYSTEM FOR THE CREATIVE PHOTOGRAPHER

The Cokin Creative Filter System

A more affordable alternative to circular filters is the versatile Cokin system, which uses square acetate filters and a special screw on holder **[1]**.

Invented by French photographer Jean Coquin and introduced in 1978, the Cokin Creative Filter System has grown to become the most popular filter system in the world, and has spawned many imitators who make filters and other accessories that are compatible with the Cokin system.

The idea is very simple; rather than buying separate filters for every lens, the Cokin system has a single filter holder into which rectangular plastic filters are slotted. The filter holder is attached to the front of the lens by an adaptor ring which has a thread to match the diameter of the lens's filter thread. Thus, when you buy a new lens with a different thread diameter, all you have to do is buy an adaptor ring for it and you can carry on using all your filters with the new lens **[2]**.

Cokin make two main series of its filter system. The A-series is smaller and cheaper, and is intended for amateurs. It can accommodate lenses with a maximum filter thread diameter of 62mm, and the filters that slot into it are 67mm wide. Professionals and people with larger lenses will opt for the more expensive P-series, which can be used with filter thread diameters up to 82mm, and uses filters that are 84mm wide.

There are also a few bigger variants for large-format and movie cameras, but the A and P series are the ones that you're most likely to encounter **[3]**.

There are over 140 filters available for either system, including polarisers, graduated, pastels and diffusers, warm-up filters, colour correction filters, centre-spots and a wide range of optical effects, such as starbursts, multi-image, close-up, rainbow, double exposure etc. Official Cokin filters are made from a special polymer called CR-39, sometimes advertised as "organic glass", which is shatterproof, scratch resistant and optically perfect. There are many third-party filters available that will fit the Cokin system, but their quality may not be as high as the official branded products.

Pros and cons of the Cokin Creative Filter System

The Cokin system doesn't have many disadvantages, but it's not completely perfect.

The main advantages of the Cokin system are its comparatively low cost and its extreme versatility. A basic P-series grad filter starter kit, consisting of the filter holder and three neutral-density grad filters, costs less than £40; the adaptor rings to attach the holder to your lens only cost around £13 each; and individual P-series filters cost between £15 and £20 each, so it's possible to buy an entire system of Cokin filters for less than the cost of some single circular screw-on filters. With over 140 filters and effects to choose from, including polarisers, starbursts, soft focus effects and close-up lenses you can create virtually any filter effect you like **[4]**.

There are only two small disadvantages to the Cokin system. First, the optical quality of the polycarbonate filters is not quite as good as the best optical glass circular filters, although you'd need an expert eye to tell the difference; and second, the filters are more prone to picking up scratches than are glass filters. However, since Cokin filters are so cheap to buy, if you scratch one so badly that it can't be used you can just replace it.

There are a lot of third-party manufacturers that make plastic filters which are designed to be compatible with the Cokin system, but the quality of these is very variable and some are distinctly second-rate. Although you might be tempted when you see a 24-piece filter kit for sale on Amazon for less than £30, these cut-price kits are best avoided. The optical quality and colour purity of the filters won't be as good as the genuine Cokin filters, and they might not fit your Cokin filter holder properly. Some of the third-party filters are a lot thinner than the Cokin ones, and may slip out of your holder.

Common types of Cokin filter

The versatile Cokin system has a lot to offer for photography enthusiasts, but here are the essentials.

Neutral density grads

The Cokin system is best known for its graduated filters, and the most popular are the neutral density grads. Use them to darken skies and balance exposure **[5]**.

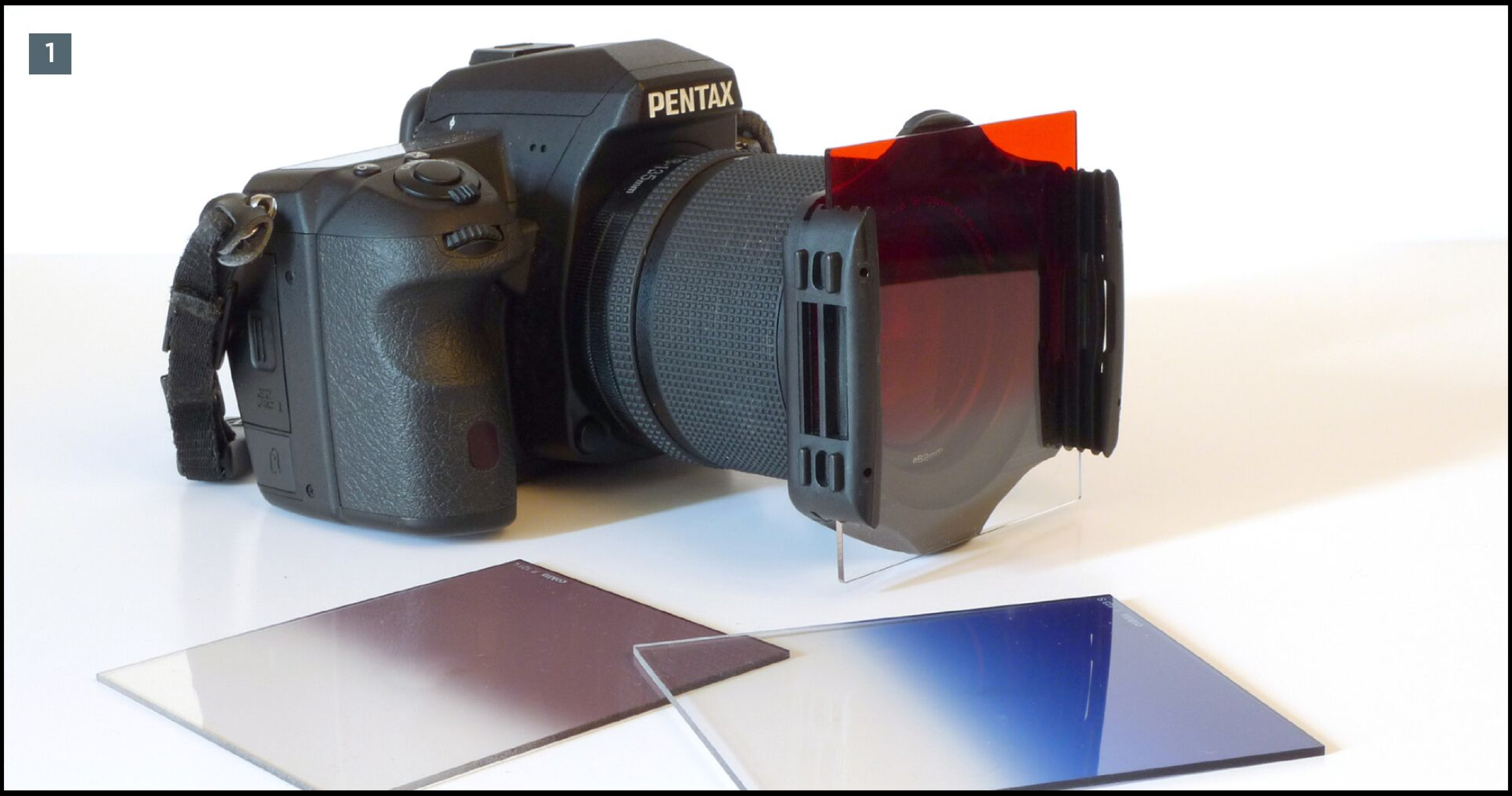
Star filter

Star filters use a diffraction grating to produce distinctive rays around any point light source. They can be quite beautiful in the right shot, but don't overuse them **[6]**.

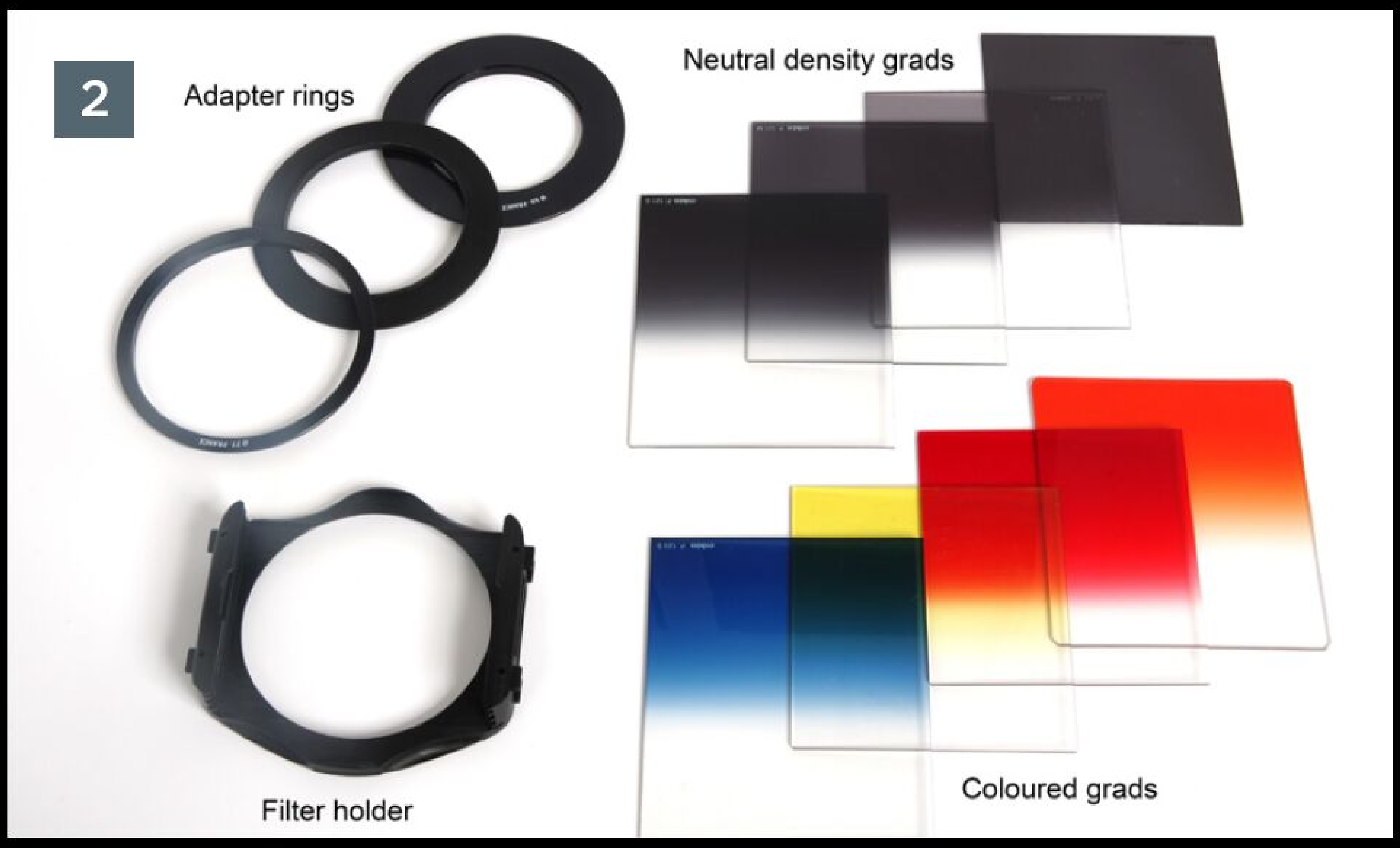
Tobacco grad

Tobacco grad filters can add a wonderful stormy look to almost any cloudy sky, and also work well with sunset shots **[7]**.

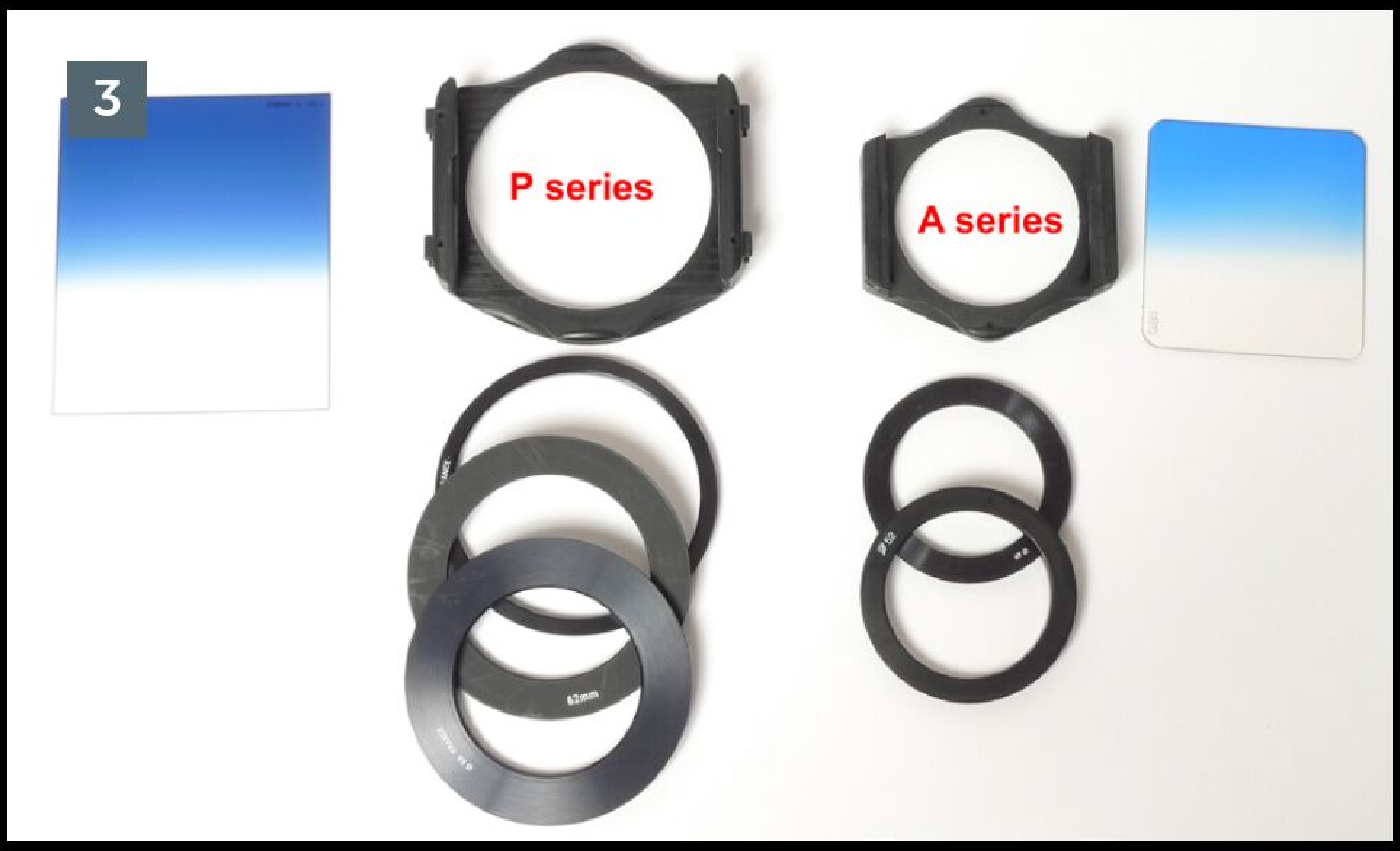
1


PENTAX

2


Adapter rings
Neutral density grads
Filter holder
Coloured grads

3


P series
A series

4

5

6

7

Using filters for black and white

SEE THE EFFECTS OF DIFFERENT COLOURED FILTERS

Even though the final result is a colourless monochrome image, colour filters have a very useful role in black and white photography. Regardless of whether you opt for circular screw-on filters or the Cokin Creative Filter system, there are certain filters that you'll want to have with you when you shoot in black and white, and ironically these are colour correction filters.

Even though the final image will be in colourless monochrome, the scene you're photographing is in colour; and by using coloured filters it is possible to alter how different colours will appear in the final image. For instance, if you shoot through a red filter, anything in the scene that is coloured red will appear brighter, while anything that is coloured blue or green will appear darker. Many photographers shooting landscape scenes in black and white will use this effect to make clouds stand out more by darkening the blue of the sky. Most photographers who regularly shoot in black and white will have red, blue and green colour correction filters in their kit, and probably yellow and orange as well.

The main thing to remember about the effect that a filter will have is this: the colour of the filter is the colour of the light that it allows to pass through, so that colour will appear lighter. The opposite colours are the ones that are blocked, and will appear darker.

Our example is a nice shot of some beach huts at Exmouth **[1]** that includes all of the additive primary colours: red, green and blue. If we shoot the same scene in unfiltered black and white it looks like image **[2]**:

As you can see there's not much difference in shade to differentiate the various tones in the image. Let's take a look at what happens to this same scene when we shoot it through different coloured filters.

Red filter

Shooting with a red filter over the lens **[3]** blocks most of the green and blue light wavelengths from passing through, so red tone will appear much brighter, while green and blue tones will appear much darker **[4]**.

When we apply a red filter to our beach hut scene, we see the result in image **[5]**:

As you can see, the blue and green doors are now a dark grey, and the blue of the sky is also much darker, making the clouds stand out. Yellow and orange filters have a similar effect, although with a slightly different look.

Green filter

Shooting the scene using a green filter **[6]** has a completely different effect. It blocks most of the red and blue wavelengths, making them appear darker, while making green tone appear much brighter **[7]**.

Shooting the same scene through a green filter makes it look like image **[8]**:

You can see that the red door is much darker, while the blue door is only a little darker. This is because the blue paint isn't quite pure blue, and has some green tones in it. The sky is also a little darker. The green door is much lighter, and you can use this effect to make plants and trees stand out in a scene.

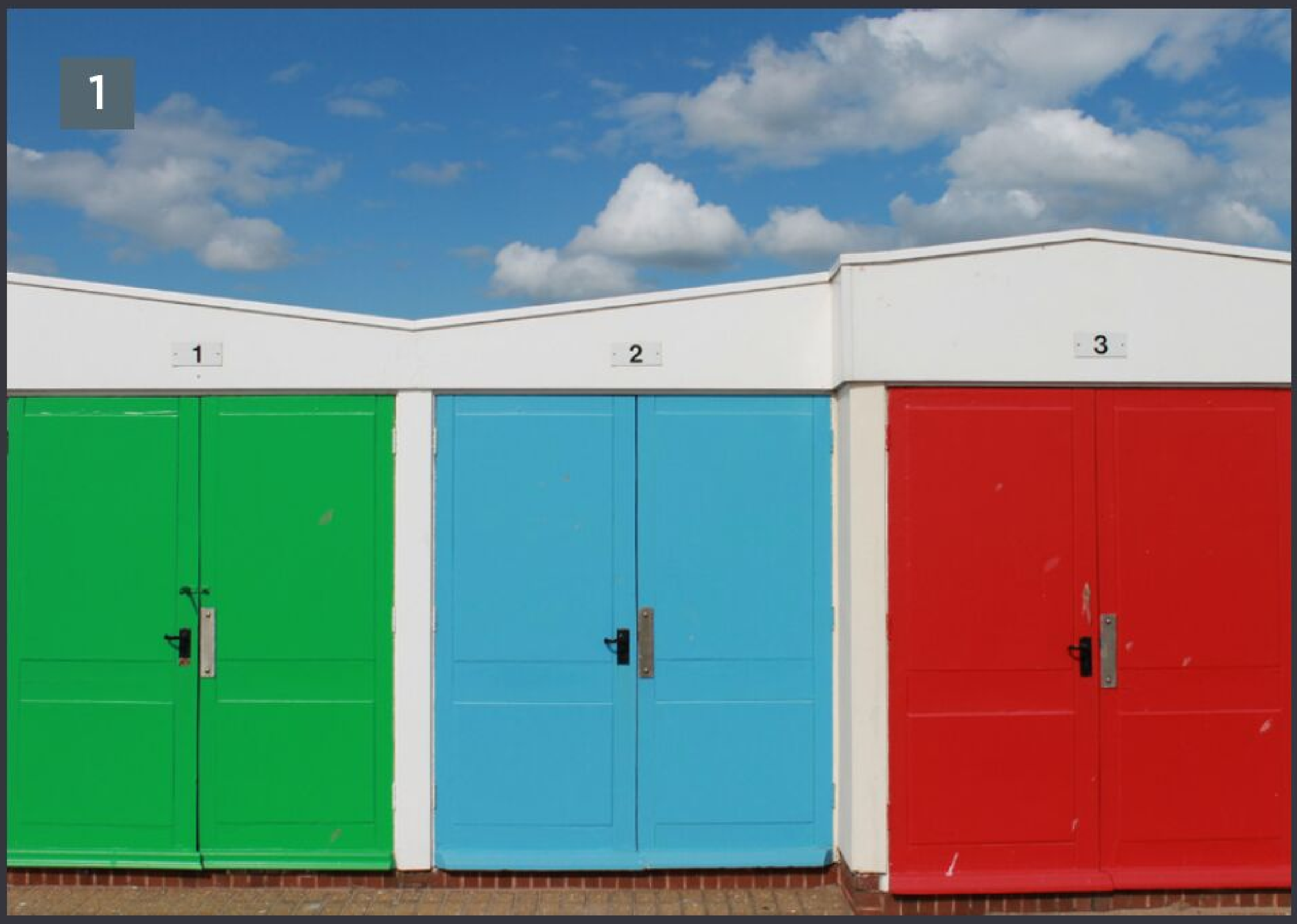
Blue filter

A blue filter **[9]** has yet another different effect. This time the blue tones are allowed through, and will be brighter, while the red and green tones are blocked by the filter and will appear darker **[10]**.

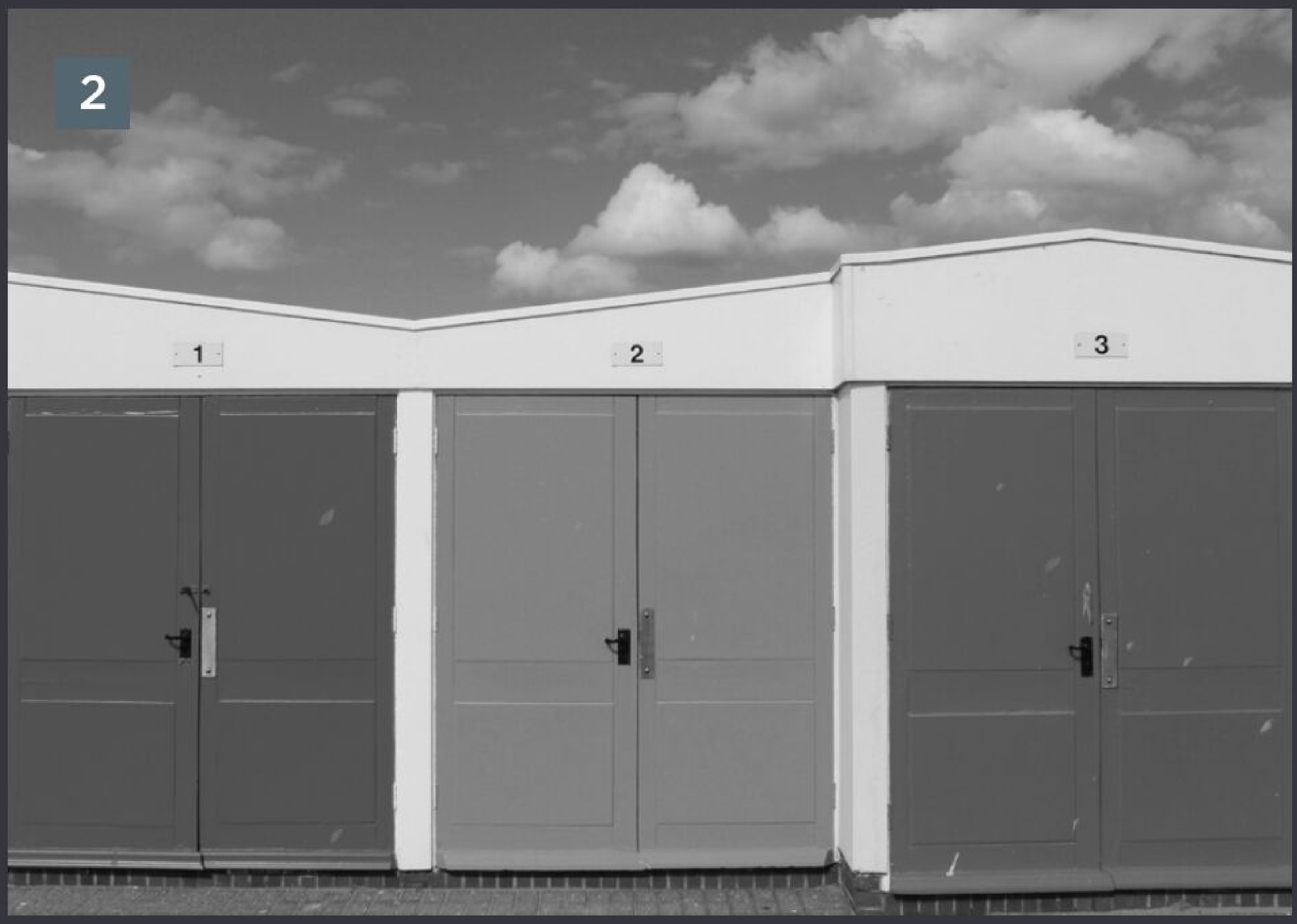
Shooting the same scene through a blue filter produces theresult in image **[11]**:

This time the blue door is the lightest, while the green and red doors are much darker. The blue of the sky is also much lighter, making the clouds stand out less. While not a desirable effect for landscapes, a blue filter can be used to enhance contrast in other types of shot.

1



2



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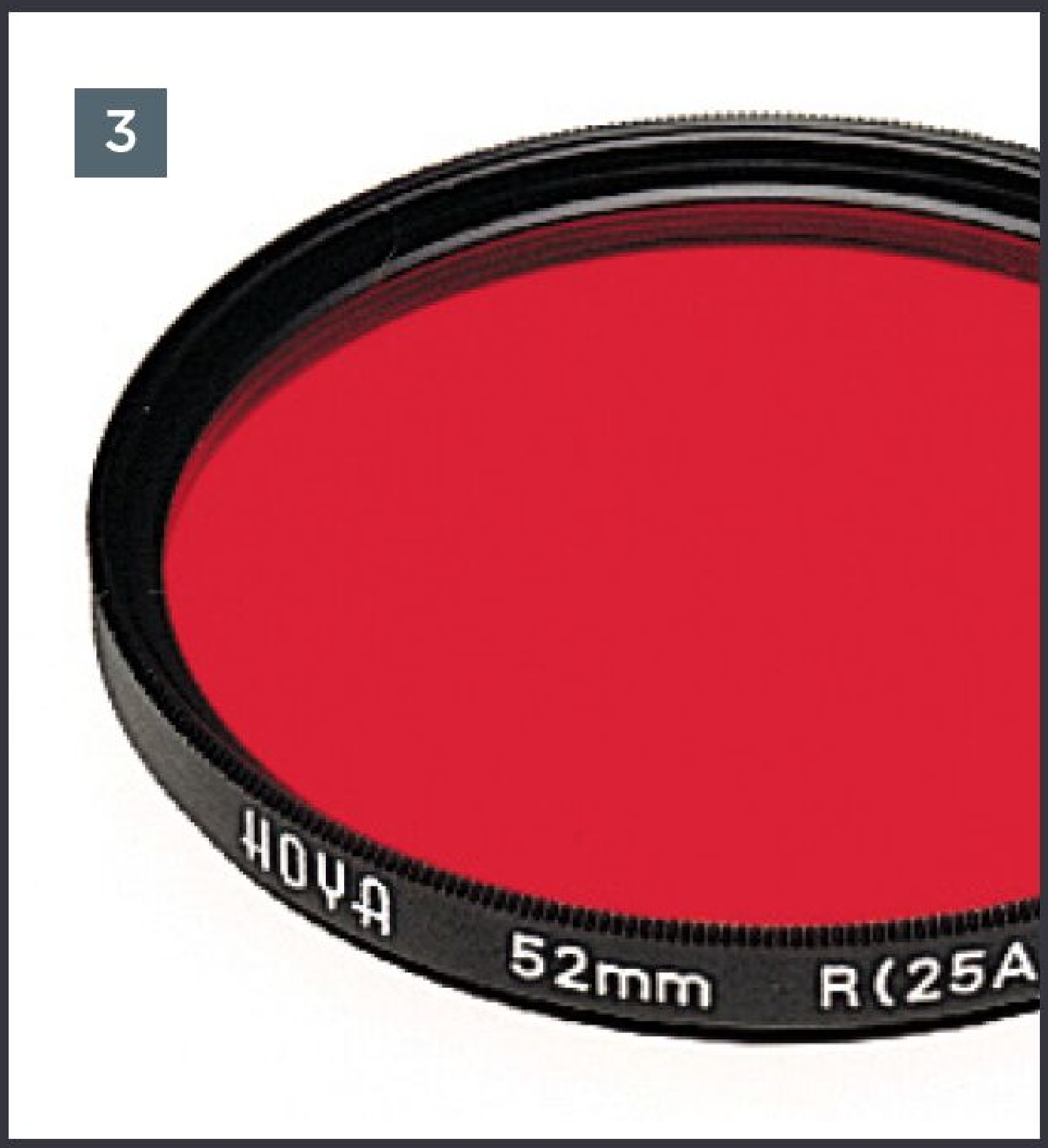
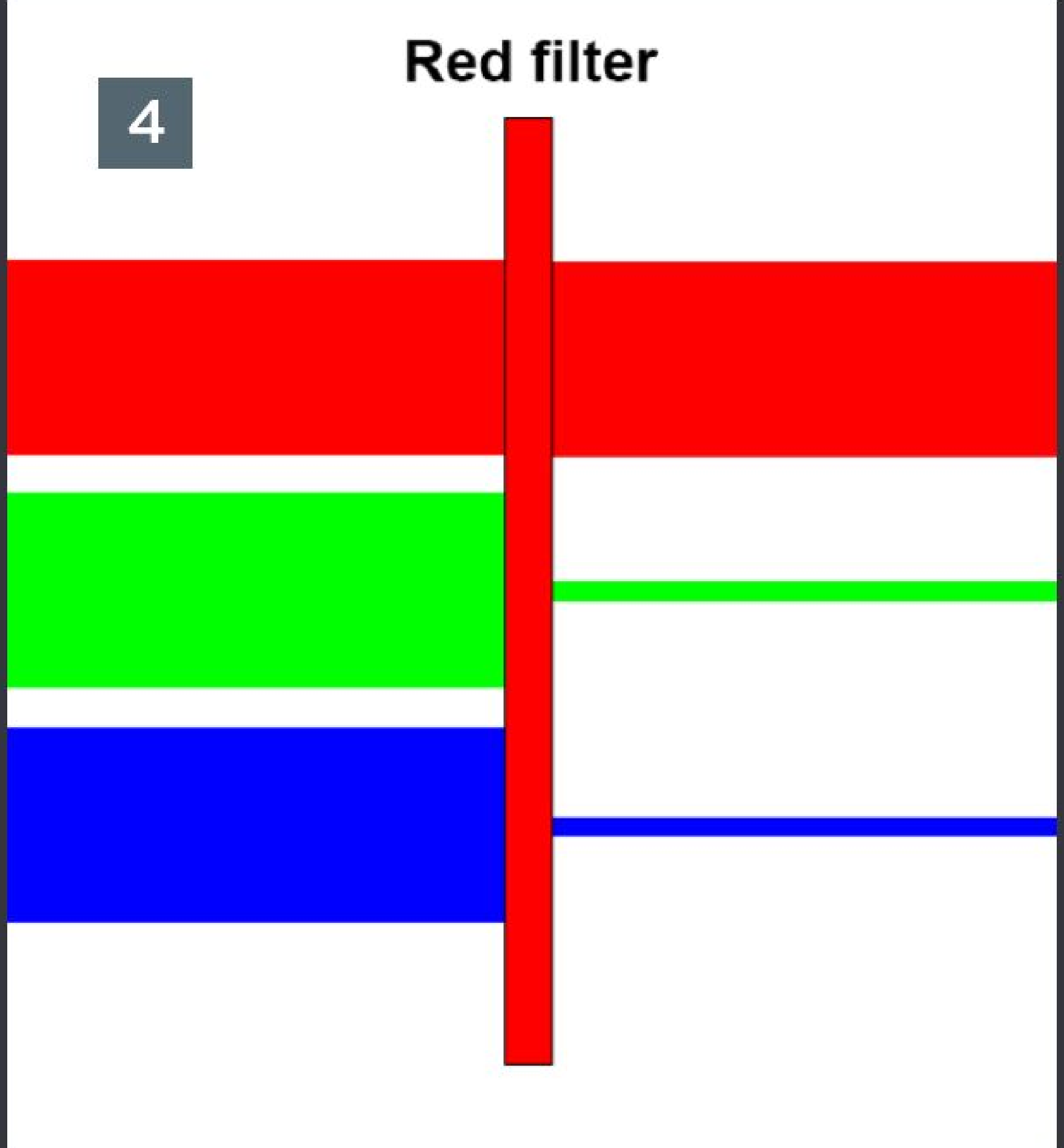
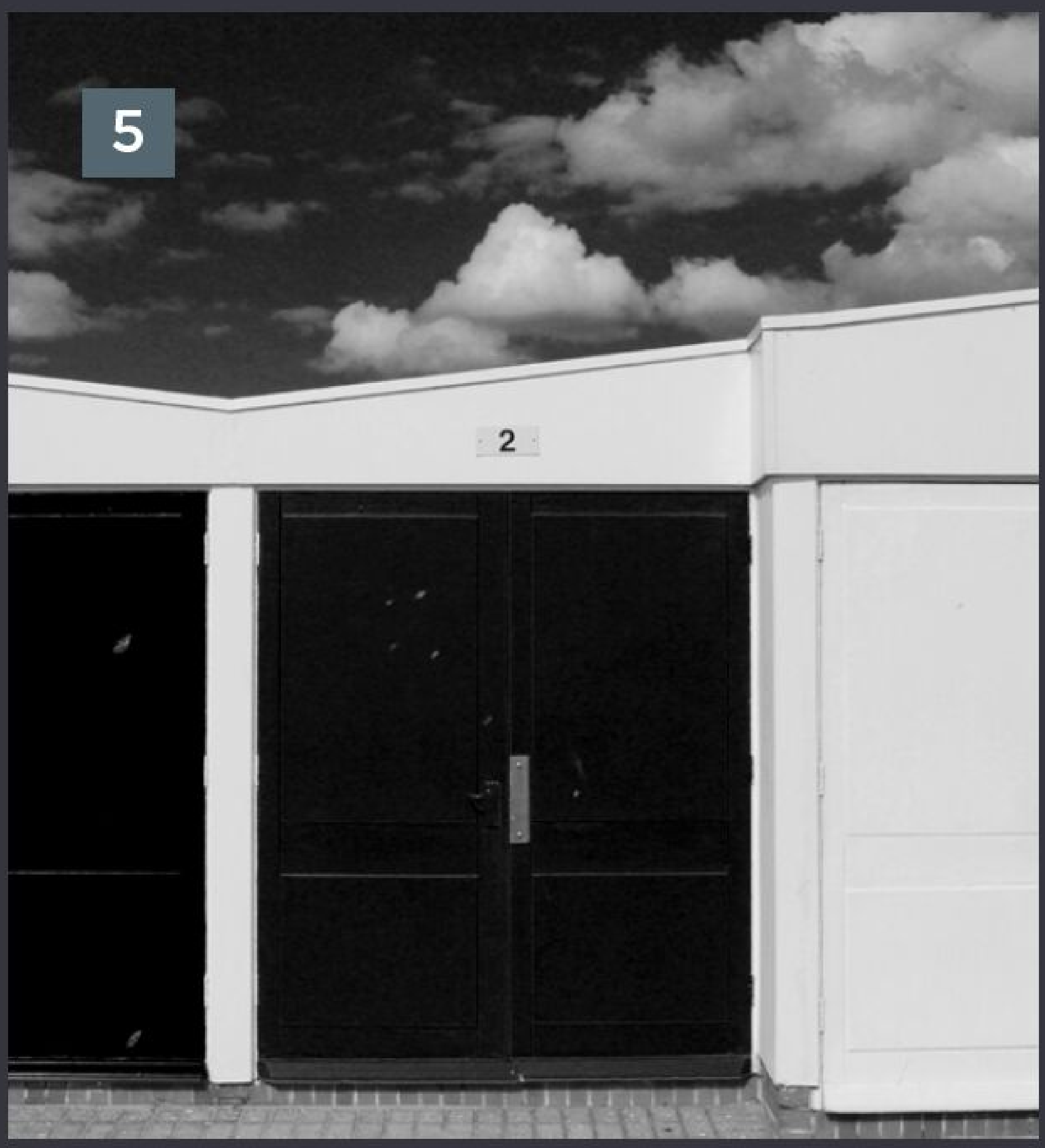

HOYA
52mm
R(25A

4


Red filter

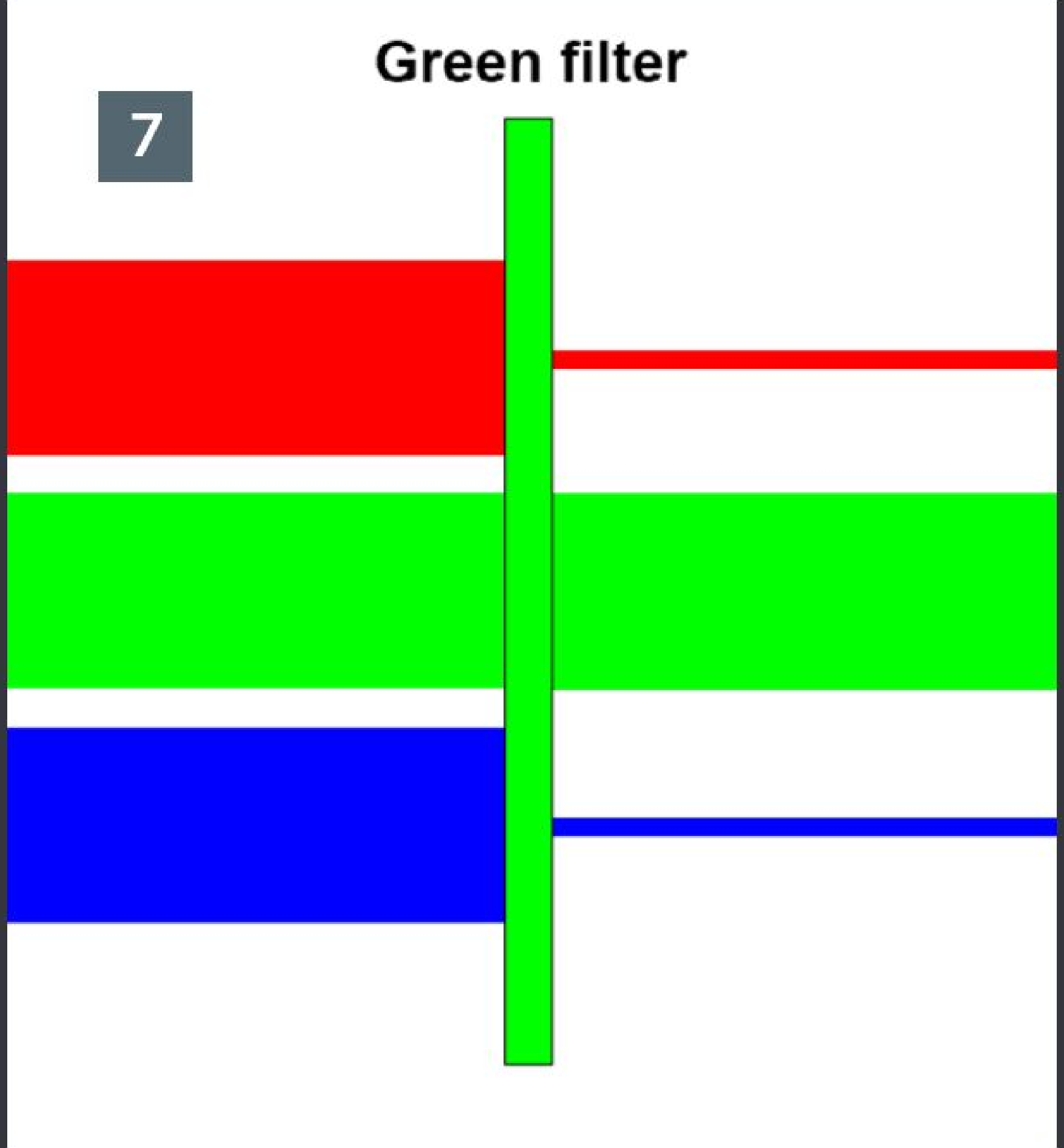
5



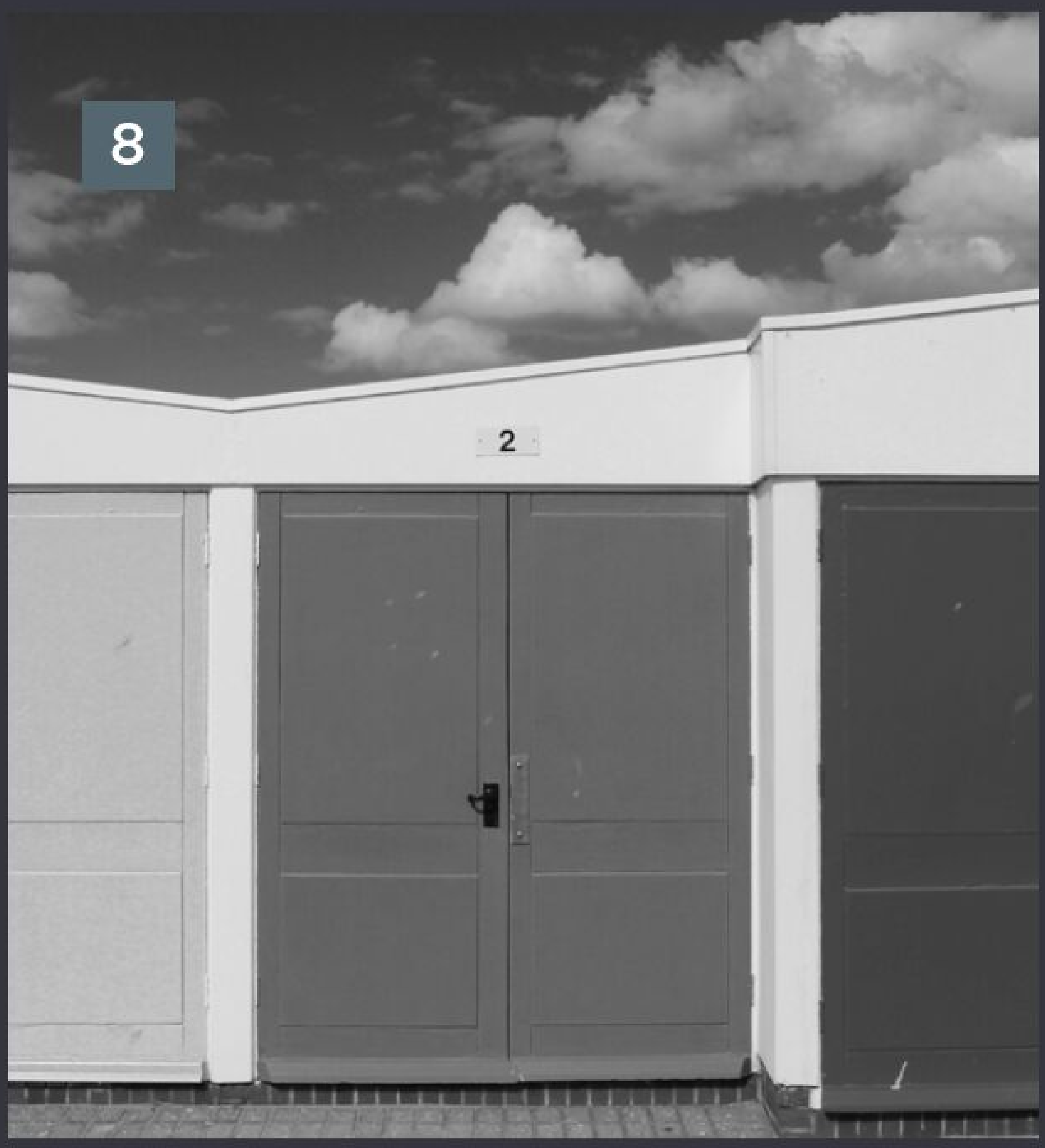
6

HOYA
52mm
G(X1)

7


Green filter

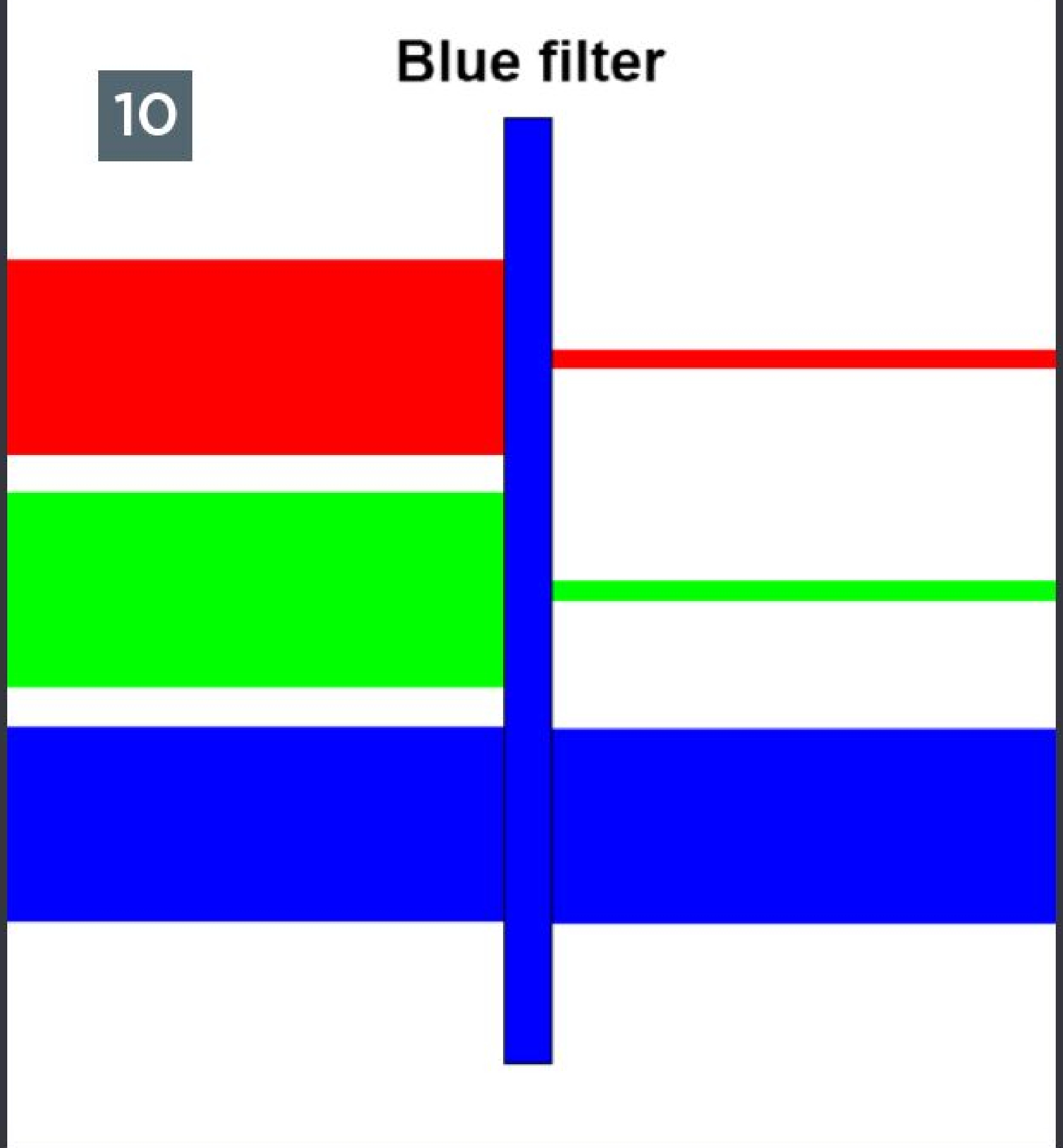
8



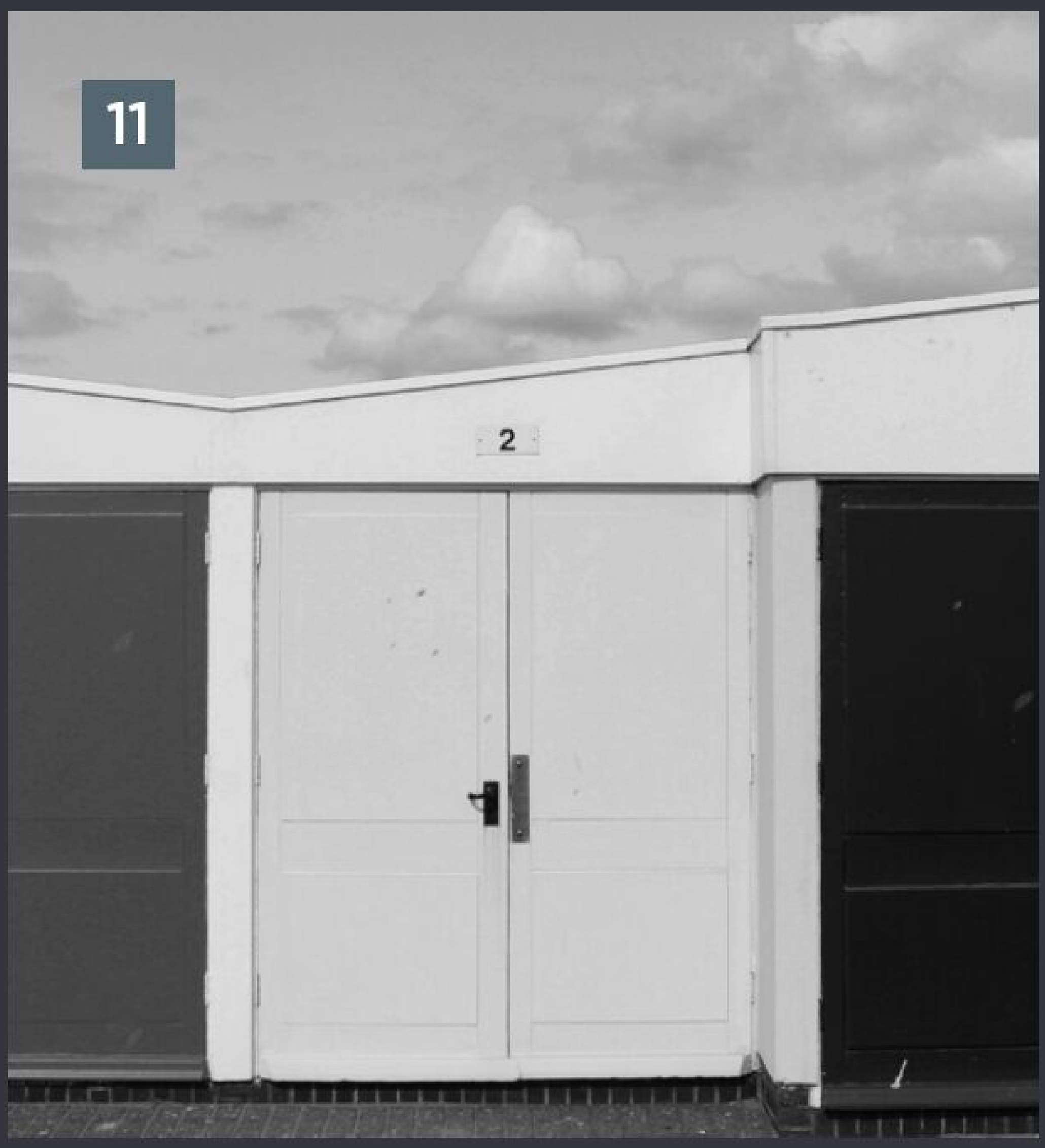
9

HOYA
HMC
72mm

10


Blue filter

11



GETTING STARTED IN BLACK AND WHITE

Understanding black and white photography

WE OUTLINE THE ESSENTIALS FOR SUCCESSFUL BLACK AND WHITE PHOTOGRAPHY

Something that is worth pointing out at this stage, and it reinforces the essence of shooting images in black and white, is to be able to 'see' in black and white. We don't mean this literally of course; it is more a method of visualising the scene in front of you, being able to assess the colours, tones and light available, and envisioning how it will translate into a finished black and white image. Wherever possible, don't go for the 'shoot it now and worry about it in Photoshop later' approach. Examining the image, with the best chance for a successful mono conversion in mind, is a great way of producing better results.

The following pages detail some of the main elements you should keep in mind as you start out on your black and white journey. Naturally, as you develop in both skill and confidence, you will find through trial and error what works best for your particular creative vision. It is by no means an exhaustive guide, but hopefully it can set you on your way by outlining what are generally regarded as the essentials for black and white photography. ■

> "...being able to assess the colours, tones and light available, and envisioning how it will translate into a finished black and white image."

Seeing in black and white

HERE'S A QUICK AND SIMPLE METHOD TO GET YOUR EYE USED TO 'SEEING' BLACK AND WHITE

Although we will be talking about how to train your mind's eye to see the black and white potential of the colour world around us unaided, there is a great method that helps to kick things off and give you some rapid feedback on how your image might look in black and white.

The current crop of point and shoot cameras and the more advanced DSLR's have the facility to record images in black and white. A lot of them even have the ability to add effects and styles to the images before they even get to your computer. We want to concentrate on the very simple setting that basically turns your device into a black and white camera with the option to add simulated colour filters to affect the tones in your shot. The menu structure may differ from camera to camera, but it is usually found under the Picture Styles tab or similar.

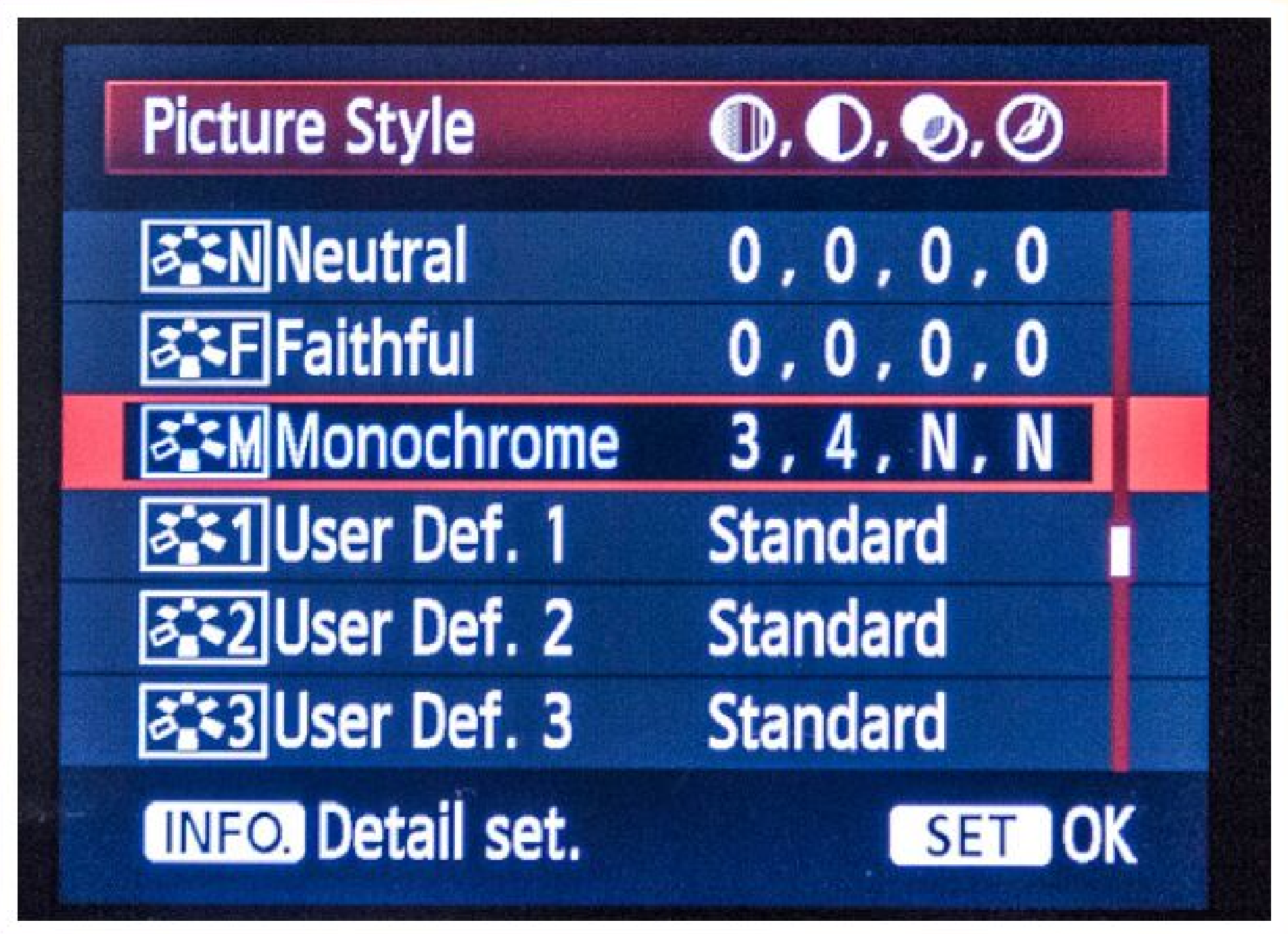
The great thing is, you can still shoot Raw images that you can edit in colour , but because you are in monochrome picture style mode, your camera's LCD screen will show the image in black and white. You could even decide to shoot in Raw and Jpeg formats at the same time. The Raw file will keep the colour data for further editing, and the Jpeg will be a processed black and white image. Either way, you have an original where the colour is retained.

Now you can go out and shoot and see immediately if an image has black and white potential and is worth keeping. ■

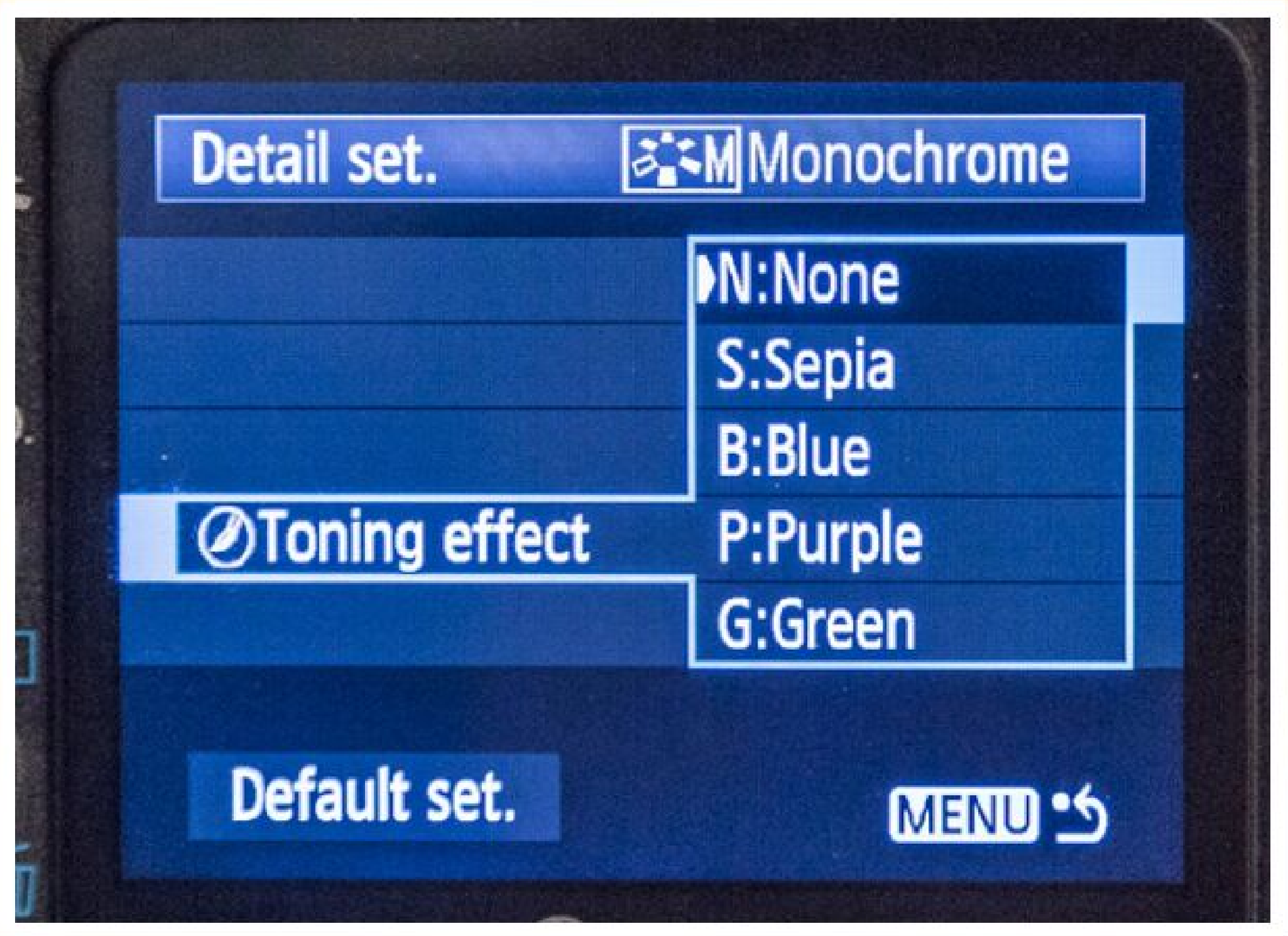
Shooting in Raw format and setting your camera's picture style to monochrome means you can shoot and review your images straight away in black and white, but because they are in Raw format, the original colour data is not lost. When you come to process your images, you'll have as much data to work with as is possible.

MENU
INFO.
AF-ON
1/1000 6.3 -2/3
100-0011
RAW+L
11/11
Canon
ON
OFF

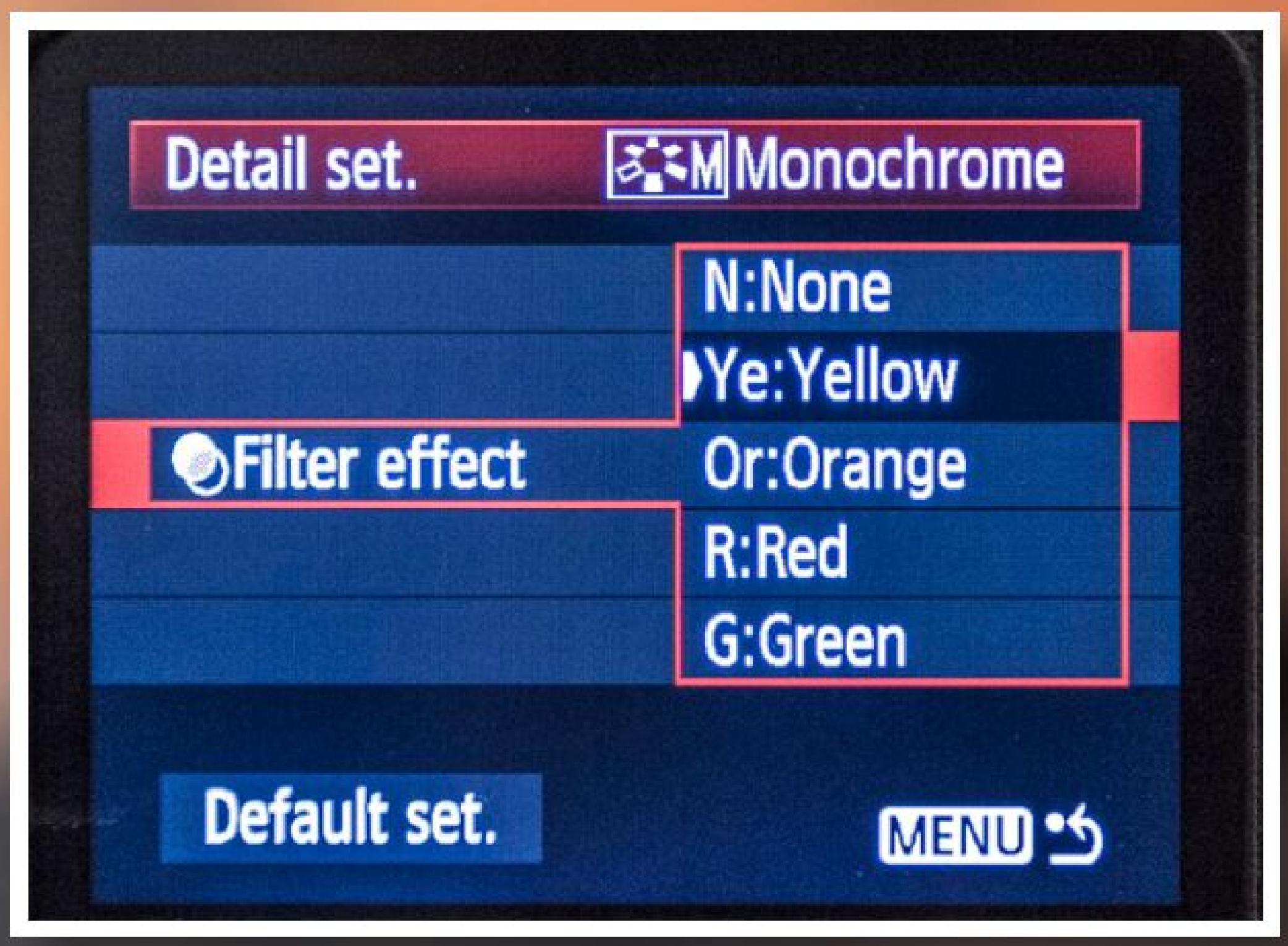
> "The great thing is, you can still shoot Raw images that you can edit in colour, but your camera's LCD screen will show the image in black and white."


Picture Style
N Neutral 0, 0, 0, 0
F Faithful 0, 0, 0, 0
M Monochrome 3, 4, N, N
1 User Def. 1 Standard
2 User Def. 2 Standard
3 User Def. 3 Standard
INFO. Detail set.
SET OK

In our example, we are showing screens from a Canon EOS 5DMK2, although menus may differ, most digital cameras offer the facility to shoot and display monochrome images, but still capture a Raw file that you can process fully later in either colour or black and white.

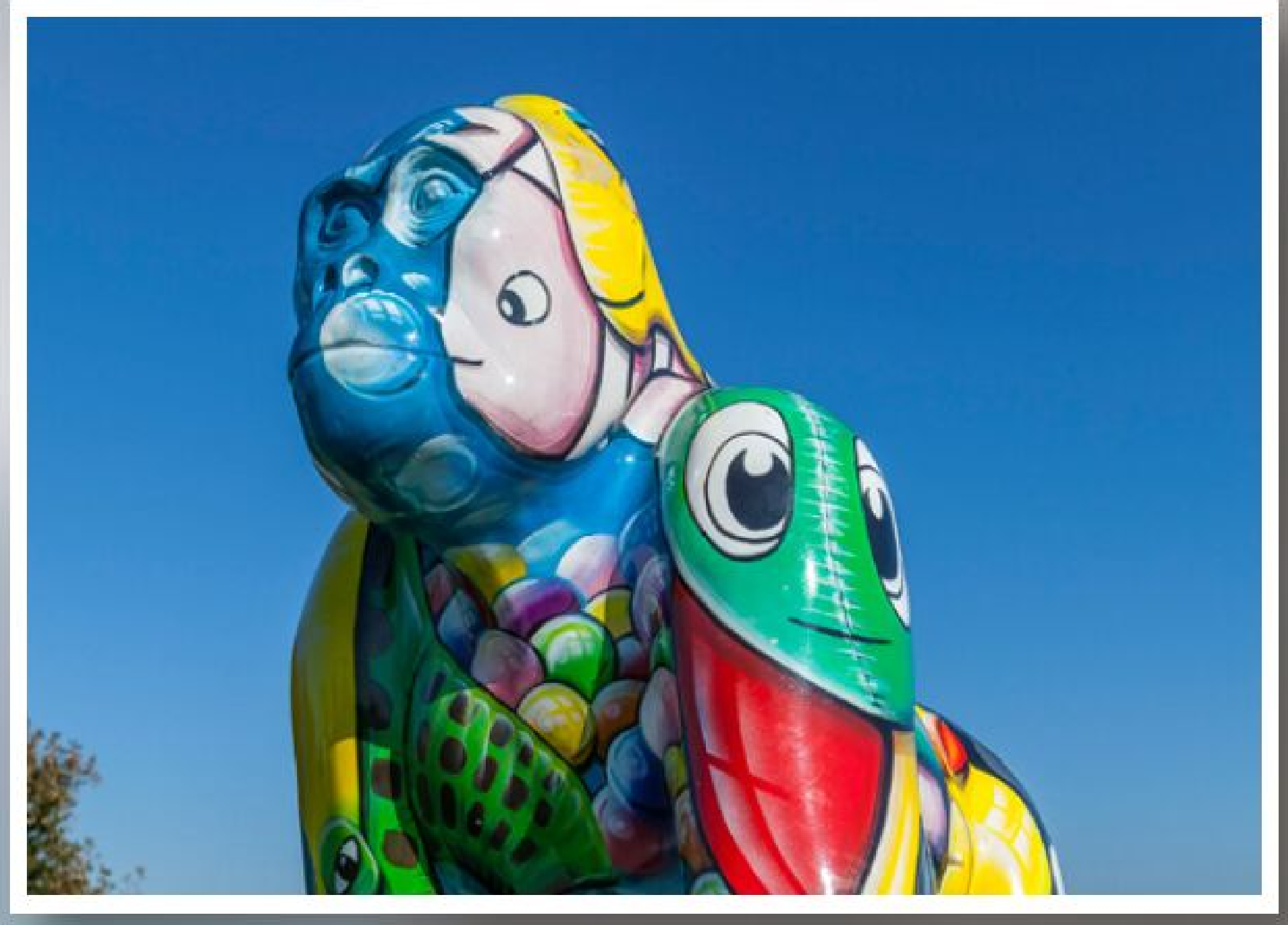

Detail set.
M Monochrome
Toning effect
N:None
S:Sepia
B:Blue
P:Purple
G:Green
Default set.
MENU

When shooting in the monochrome picture style, you also have the option to add either filter or toning effects. The filter effect simulate the use of real-world coloured filters and the toning effects will tint your images in a numbered of preset colours from sepia to purple, to green.

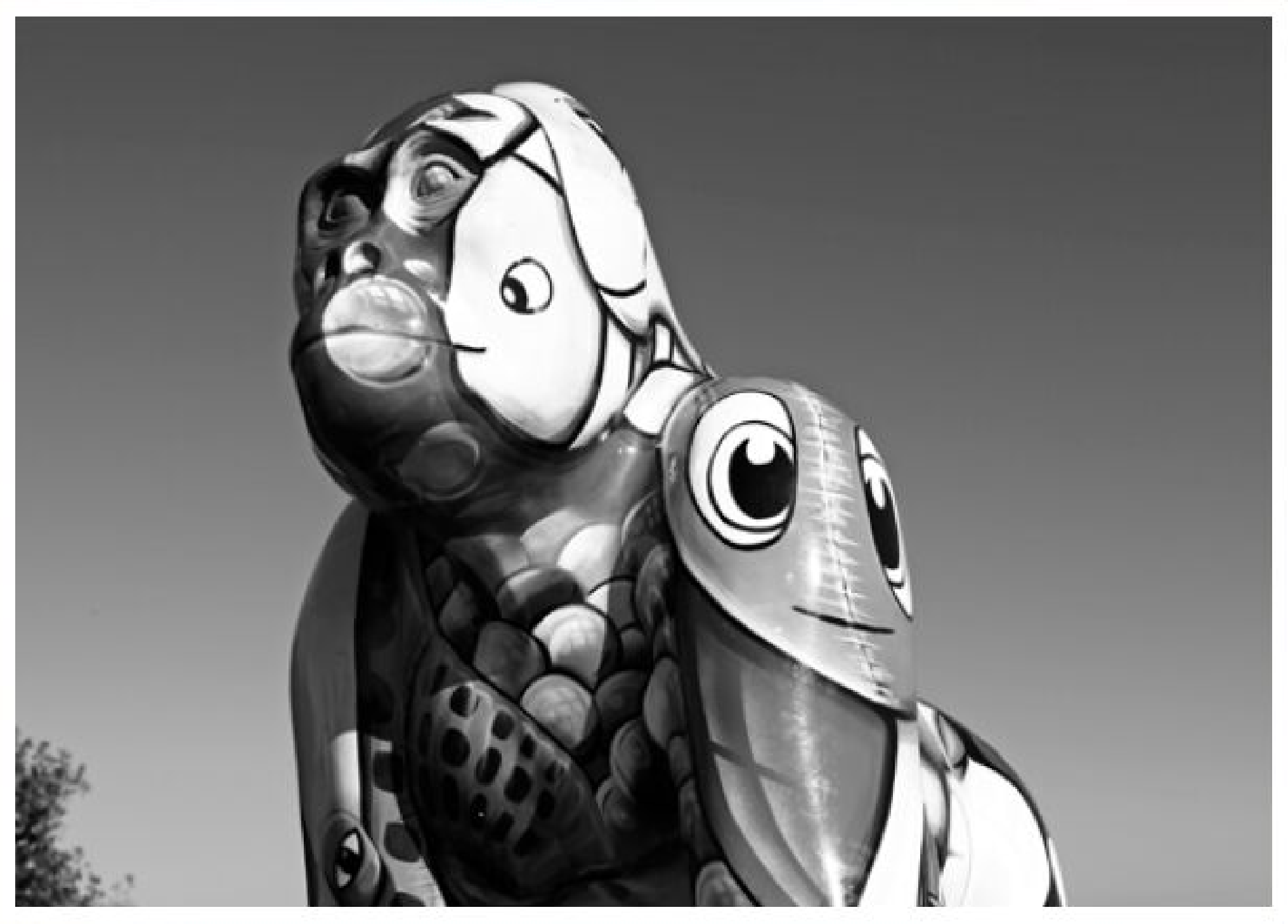

Detail set.
M Monochrome
Filter effect
N:None
Ye:Yellow
Or:Orange
R:Red
G:Green
Default set.
MENU

Under filter effects, you can choose from yellow, orange, red and green filters. They all will have a subtle effect on the monochrome image that is recorded. For example, a bright blue sky, shot in monochrome with a red filter, will be noticeably darker than if the filter were not applied.

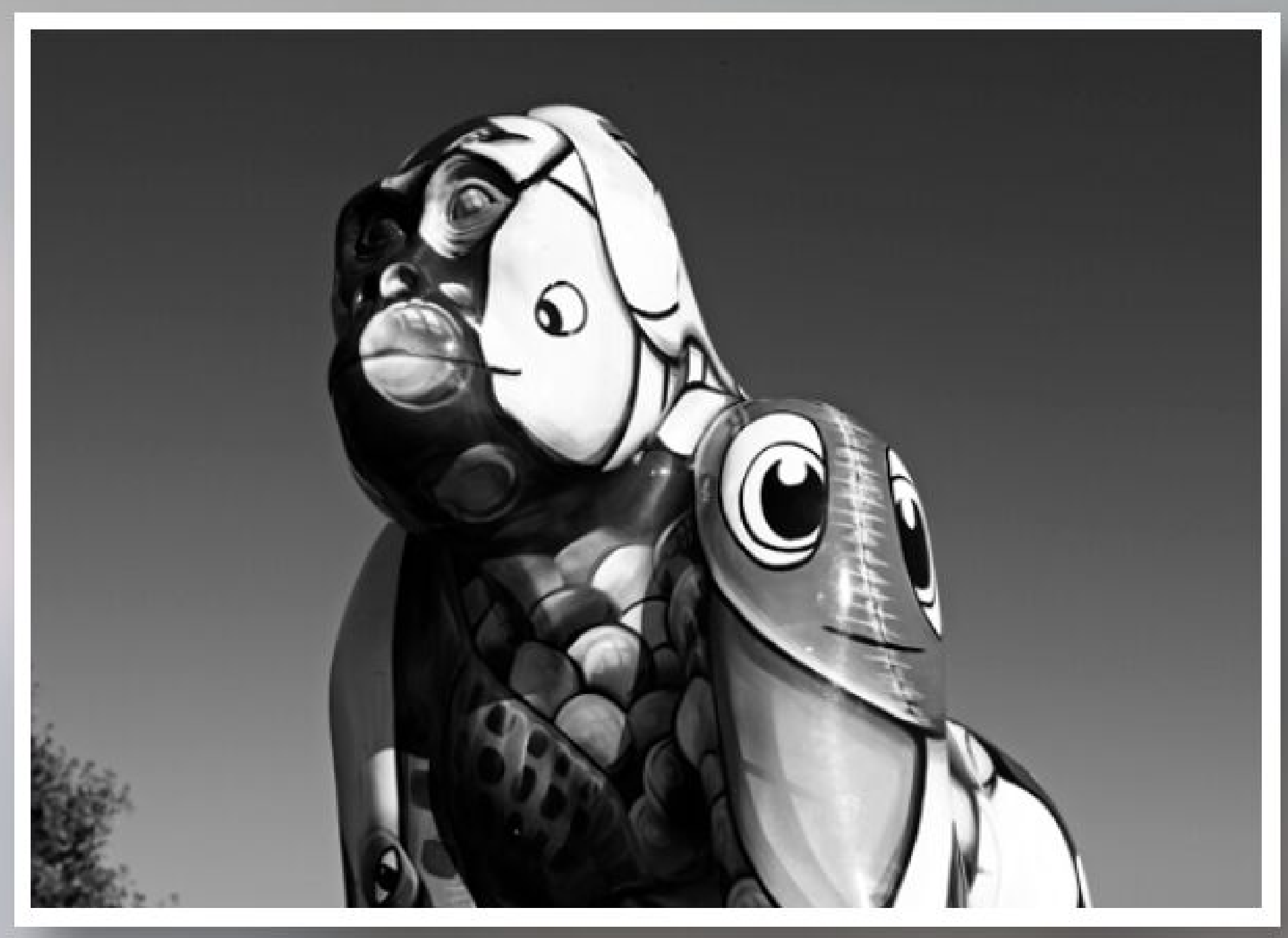
Below are some examples of the monochrome picture styles available to the Canon 5DMK2. The camera was set up to shoot one editable Raw file as well as a fully processed Jpeg, which had the particular effect permanently applied at the time of shooting.



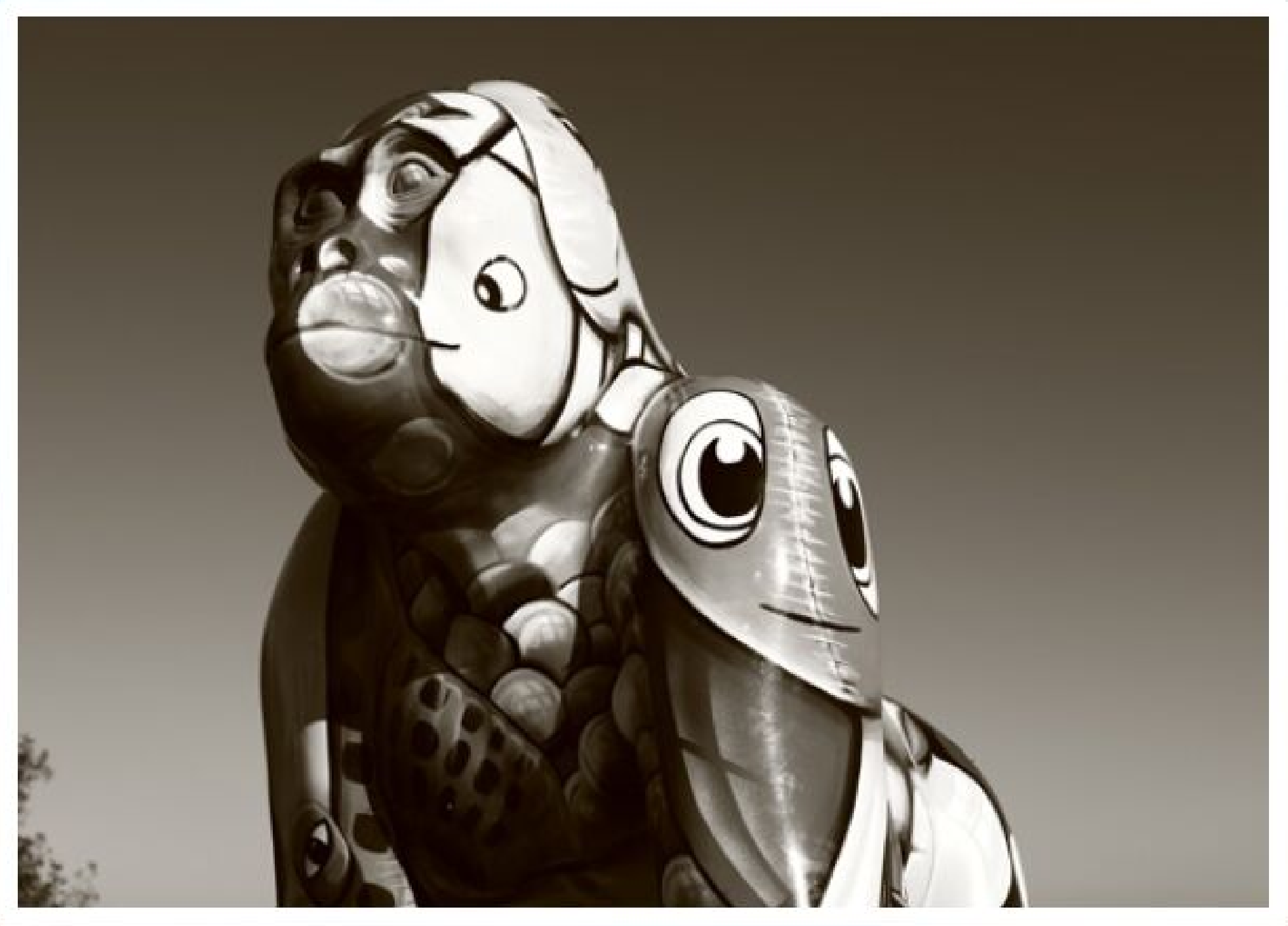
Original colour version from the Raw file.



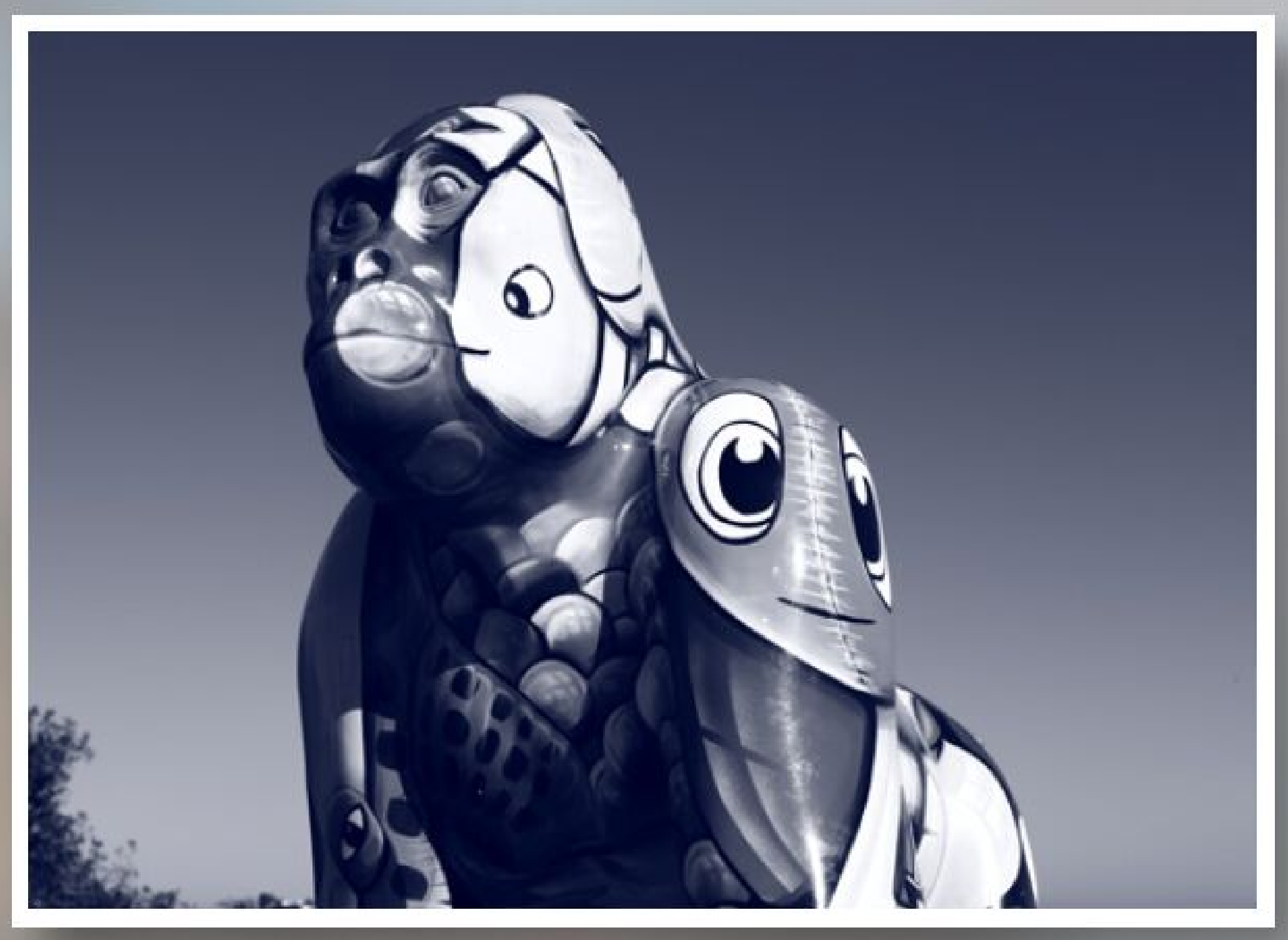
Monochrome with Yellow filter applied.



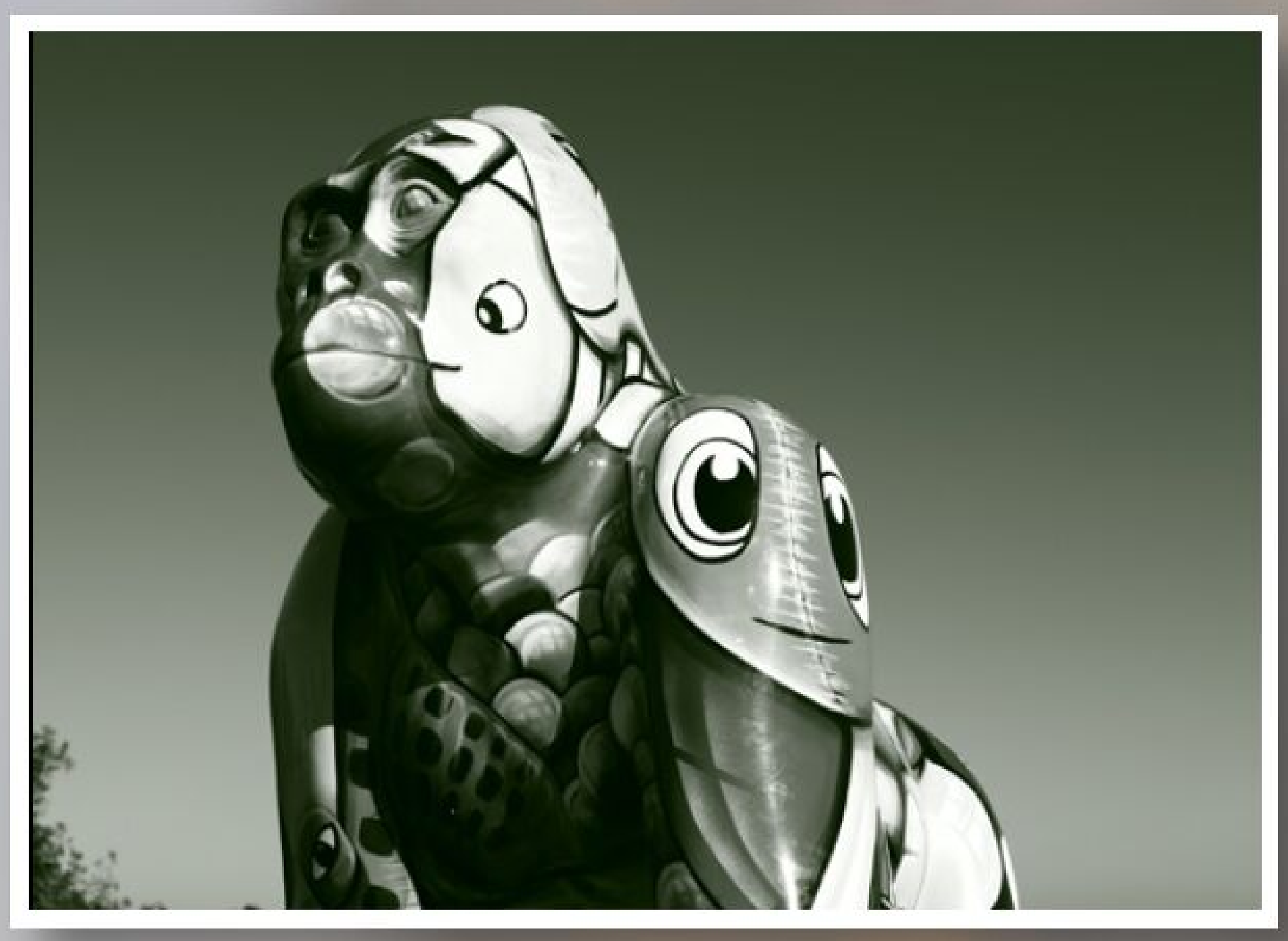
Monochrome with Red filter applied.



Sepia toning effect applied.



Blue toning effect applied.



Green toning effect applied.

Top black and white photography tips

ESSENTIAL TIPS FOR BETTER BLACK AND WHITE IMAGES

1

Shoot in colour and in Raw

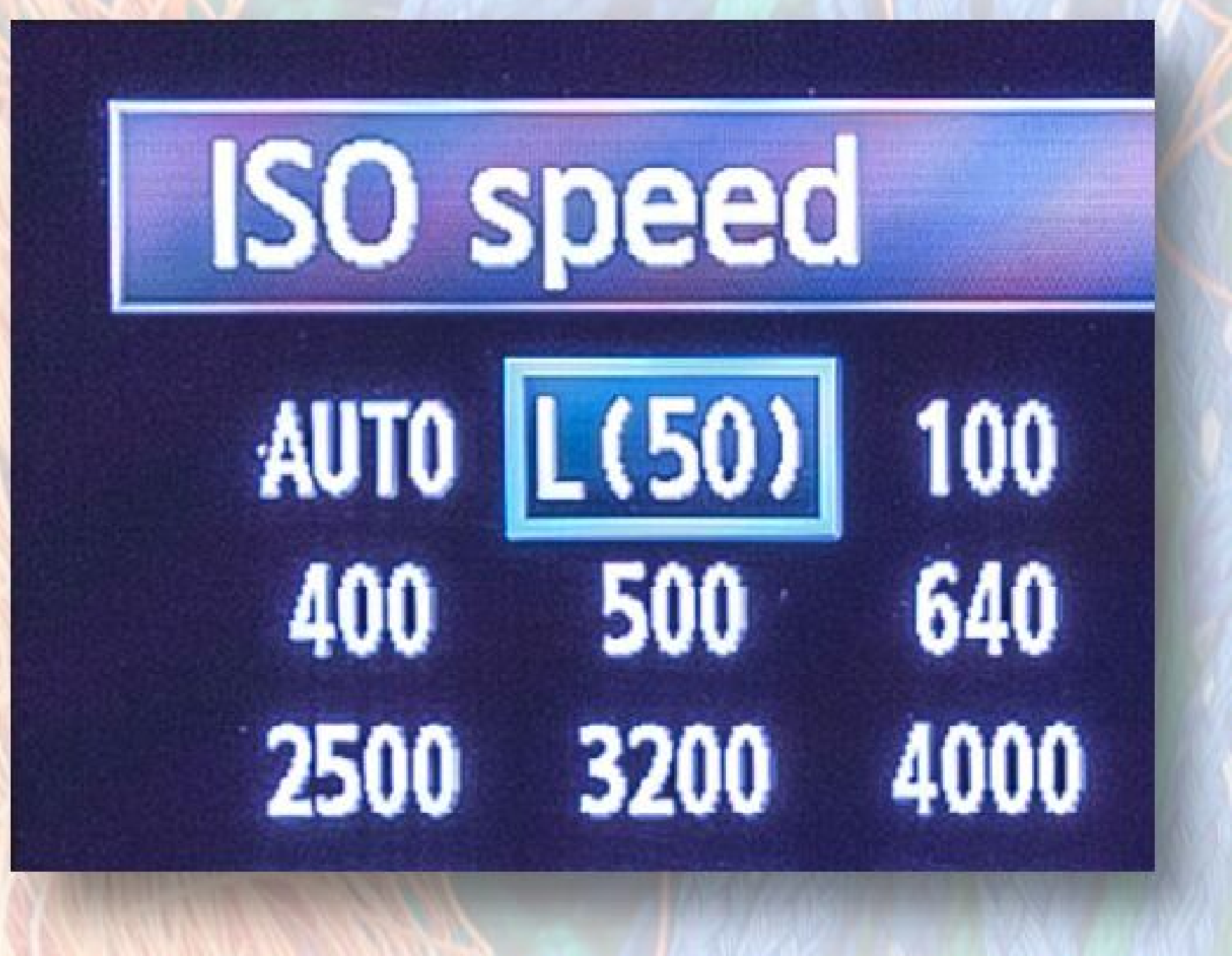
A lot of modern cameras have so-called creative functions that give you the option to capture your images in black and white at the outset. Doing this may actually result in a loss of tonal range. If you shoot in colour and especially in Raw format, you will be capturing the full gamut of tonality that your camera's sensor can see. This is a much better starting point with more control than an in-camera mono image. It won't stop you if your camera can't shoot Raw, and you have to use jpegs instead; just keep them in colour.

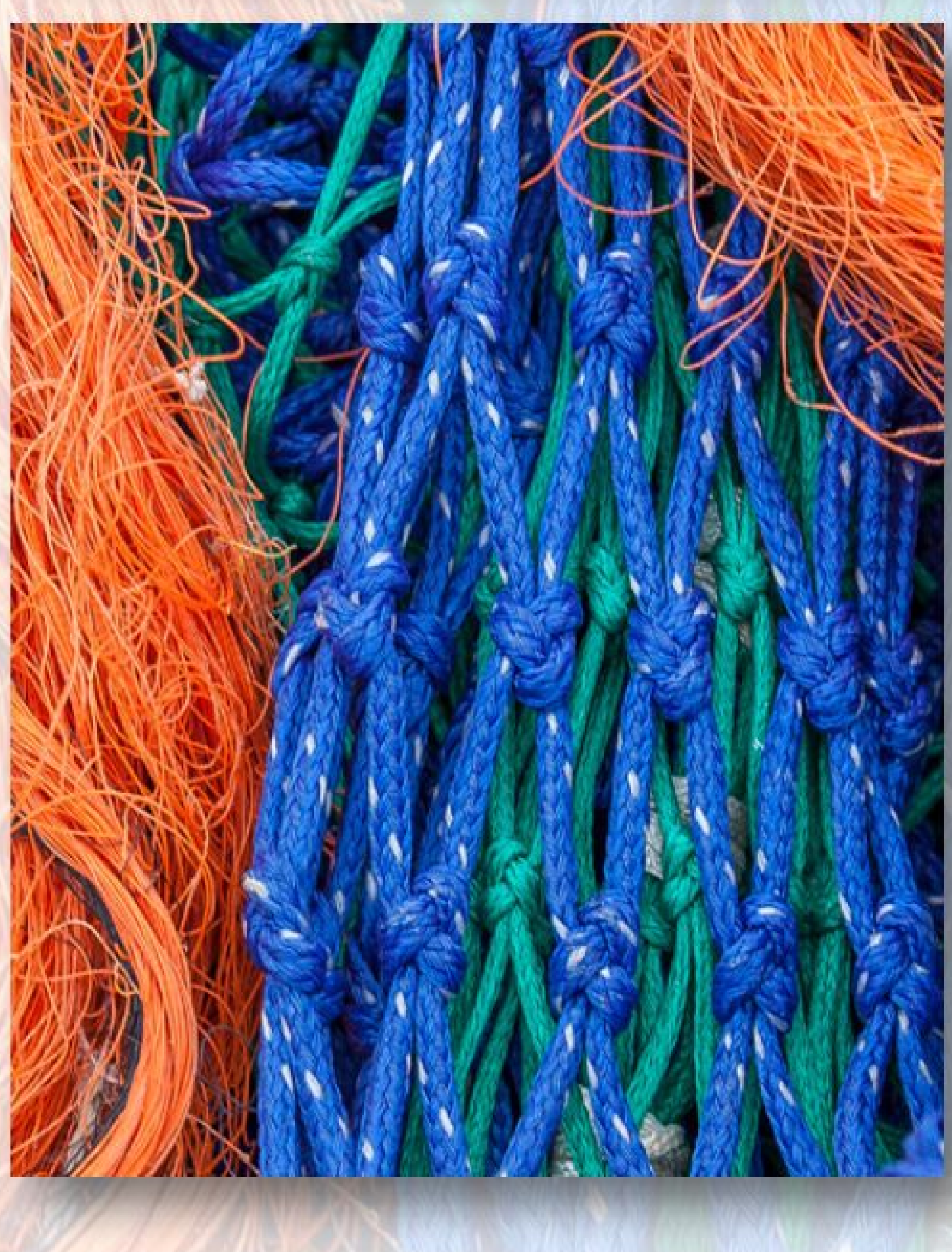
Image quality
Standard
22M 5760x3840 [1829]
RAW
RAW
MRAW
SRAW
JPEG
L
L
M
M
S1
S1
S2
S3

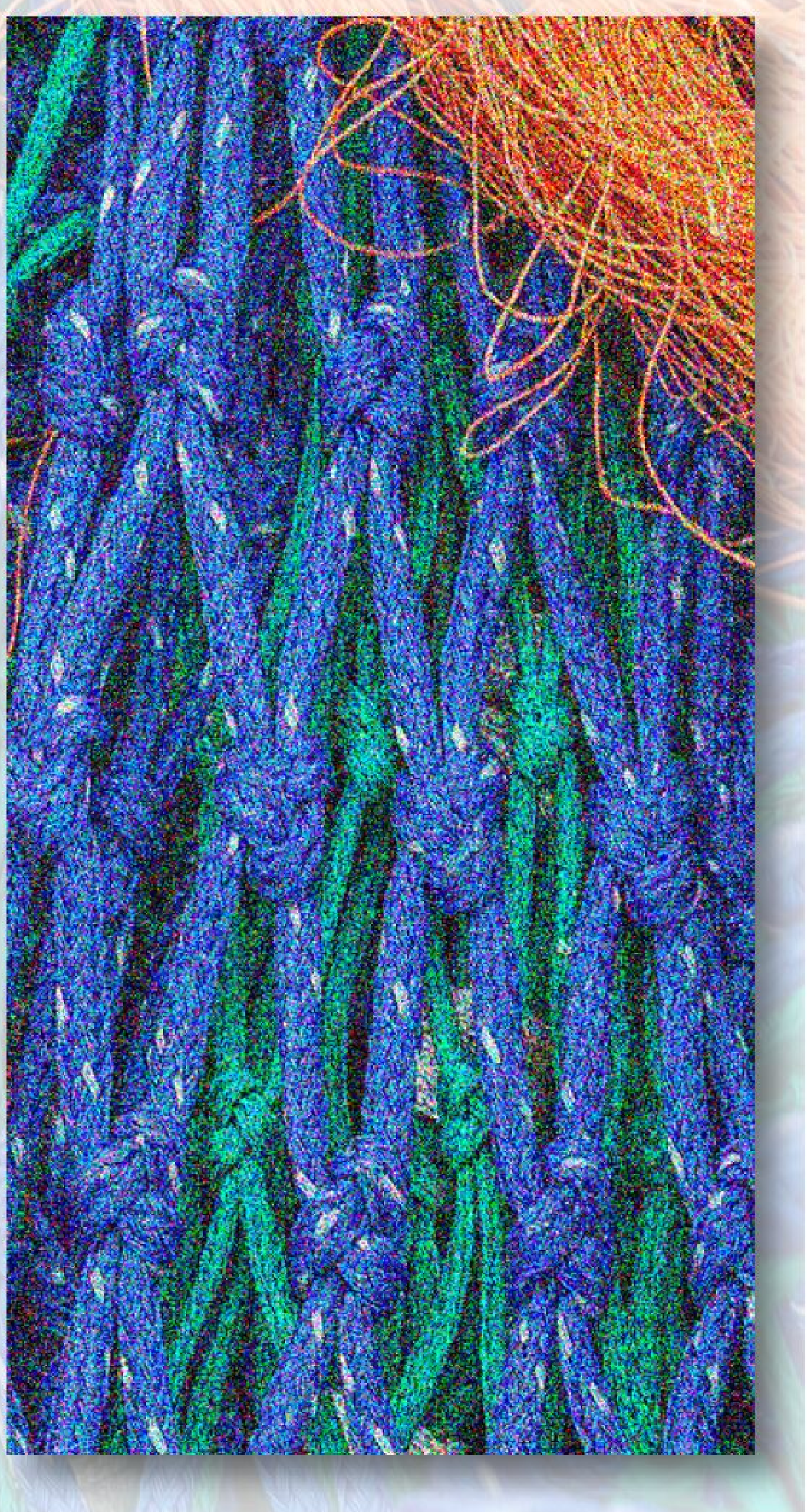
2

Keep your ISO low

The lower your ISO, the less grainy the images will be. If it means you need a tripod to handle slower shutter speeds, then that is a good thing. Shooting from a tripod tends to slow down the shooting process and can be more considered. Too often a camera's ISO setting will be left on auto, pushing up ISO speeds to make sure there is no camera shake. The downside is that higher ISO equals higher noise in your image, which will only be exacerbated by the post-processing stage. You can always add grain during the processing stage, if you think the image will somehow benefit from it.





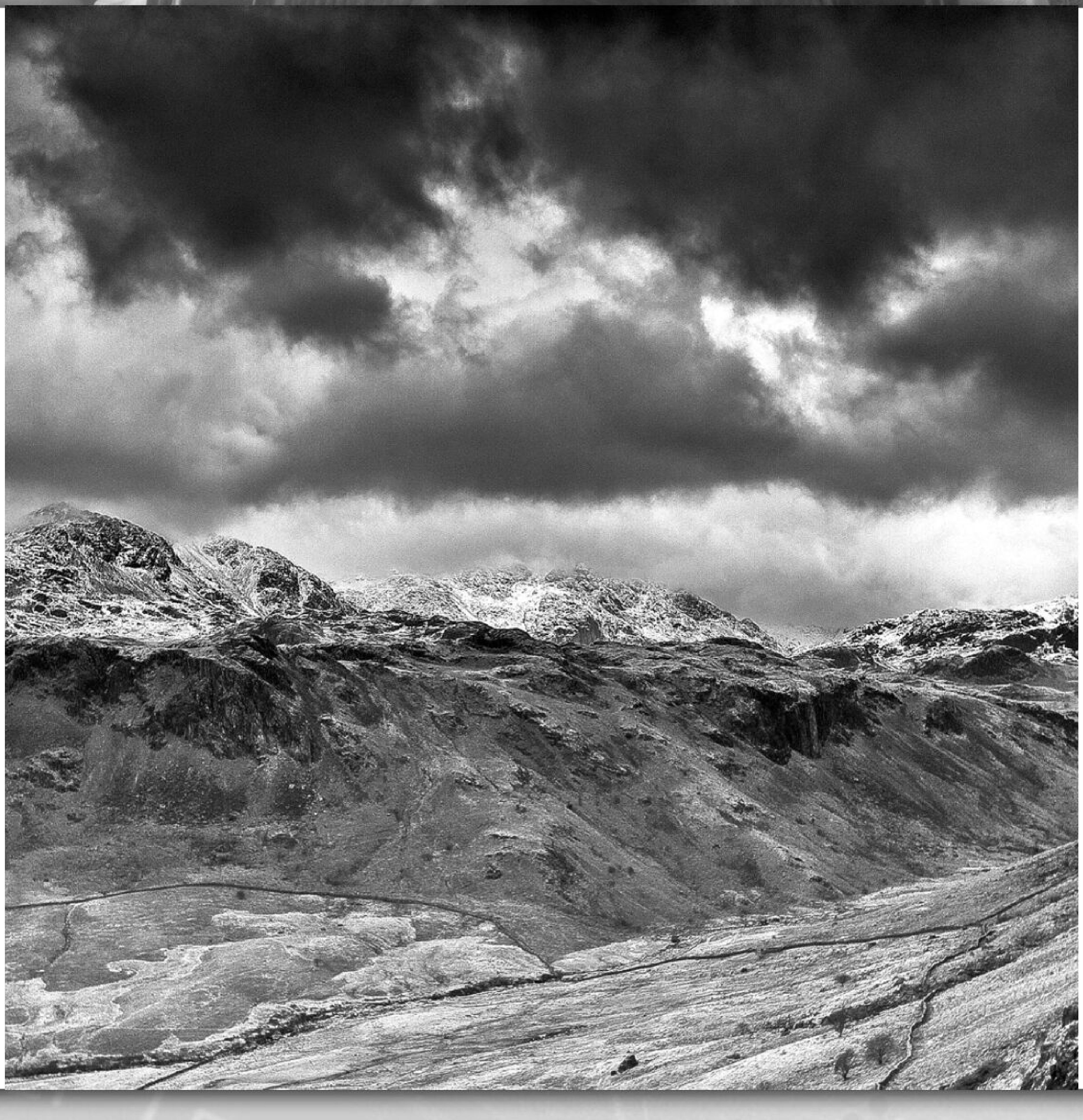


CANON EF LENS
EOS 5D
TOP TIPS

3

The best conditions to shoot

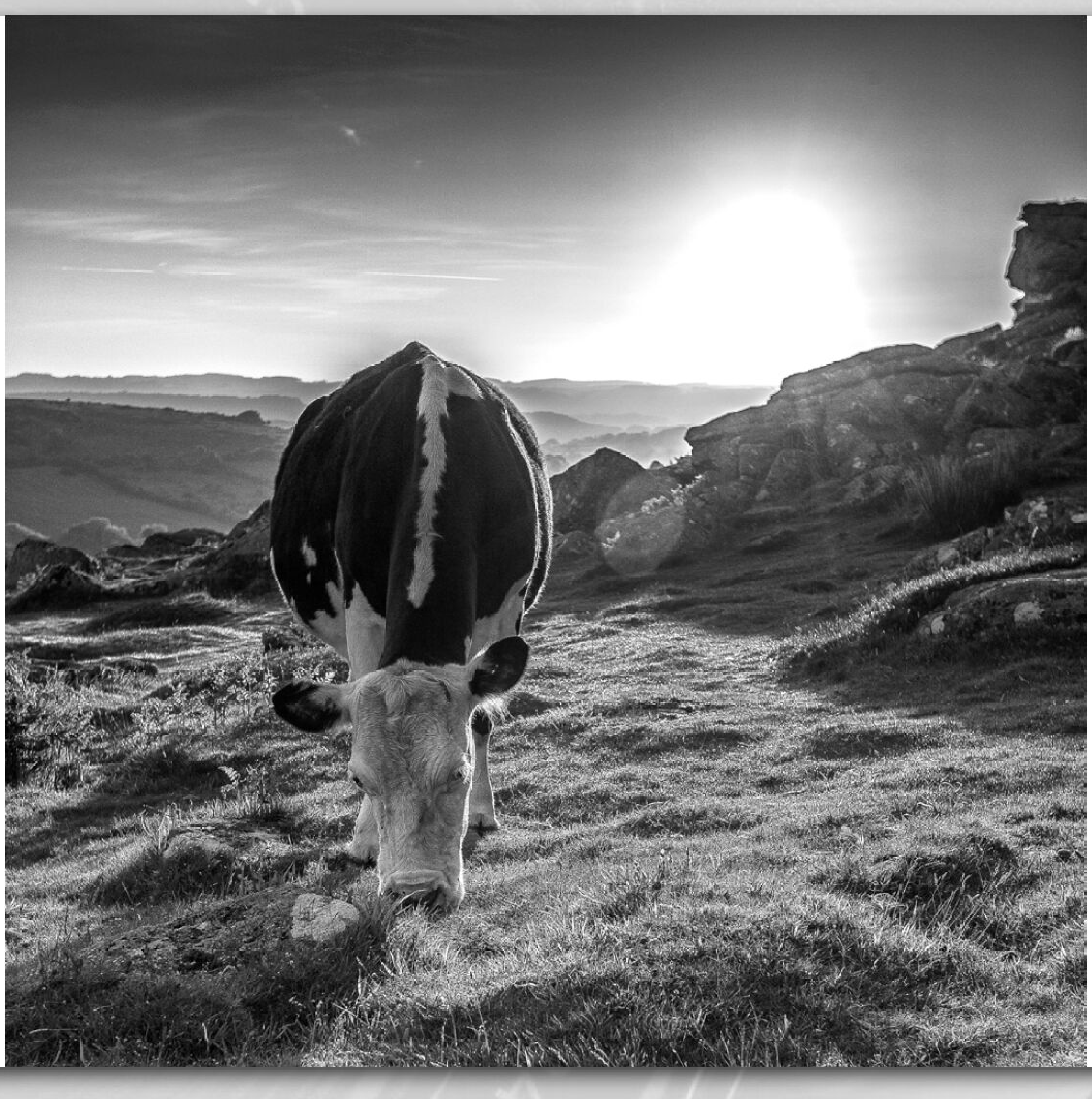
The truth is, there aren't necessarily any best conditions in which to shoot black and white. Some mono shooters actually prefer to take their shots on overcast and generally dark days. The low contrast seems to be a draw for these photographers. Certainly, a grey cloudy sky can be made to look very moody and dramatic, as opposed to a blue sky with white puffy clouds. A lot of it will come down to your personal preference and mono conversion technique. However, just because it's overcast it doesn't mean there aren't any interesting image possibilities out there.



4

Lighting in your scene

Your image can stand or fall on the quality of the light in the scene. It is generally held that midday sunlight knocks detail flat and creative possibilities are more limited. For landscapes particularly, the first light of morning or the last light of evening is a much more prized commodity. Light glancing across the land picks out details, throws long dramatic shadows and enhances contrast. You can use this great light for mood and drama that is absent when the sun is at its zenith.

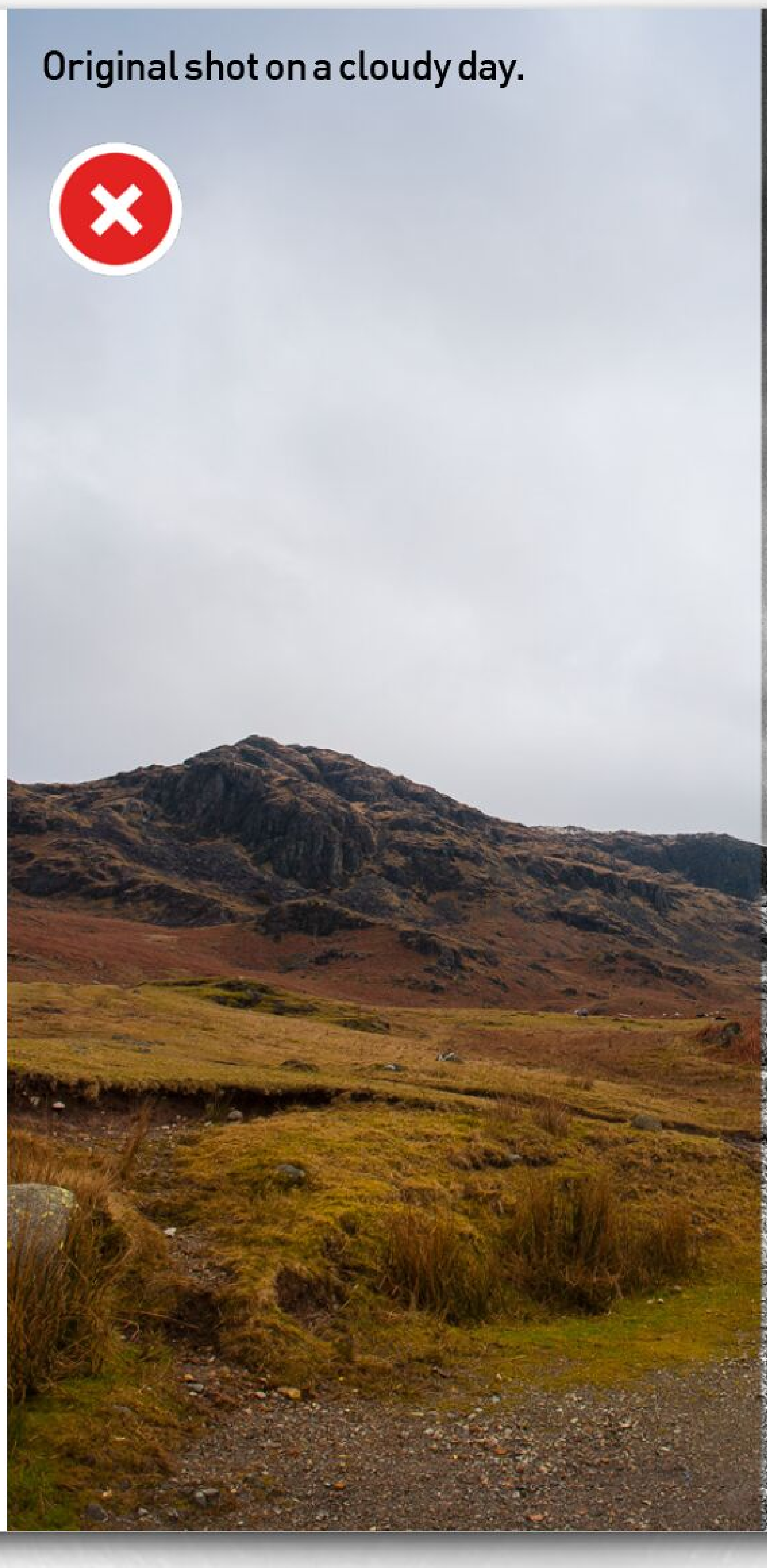


Top black and white photography tips

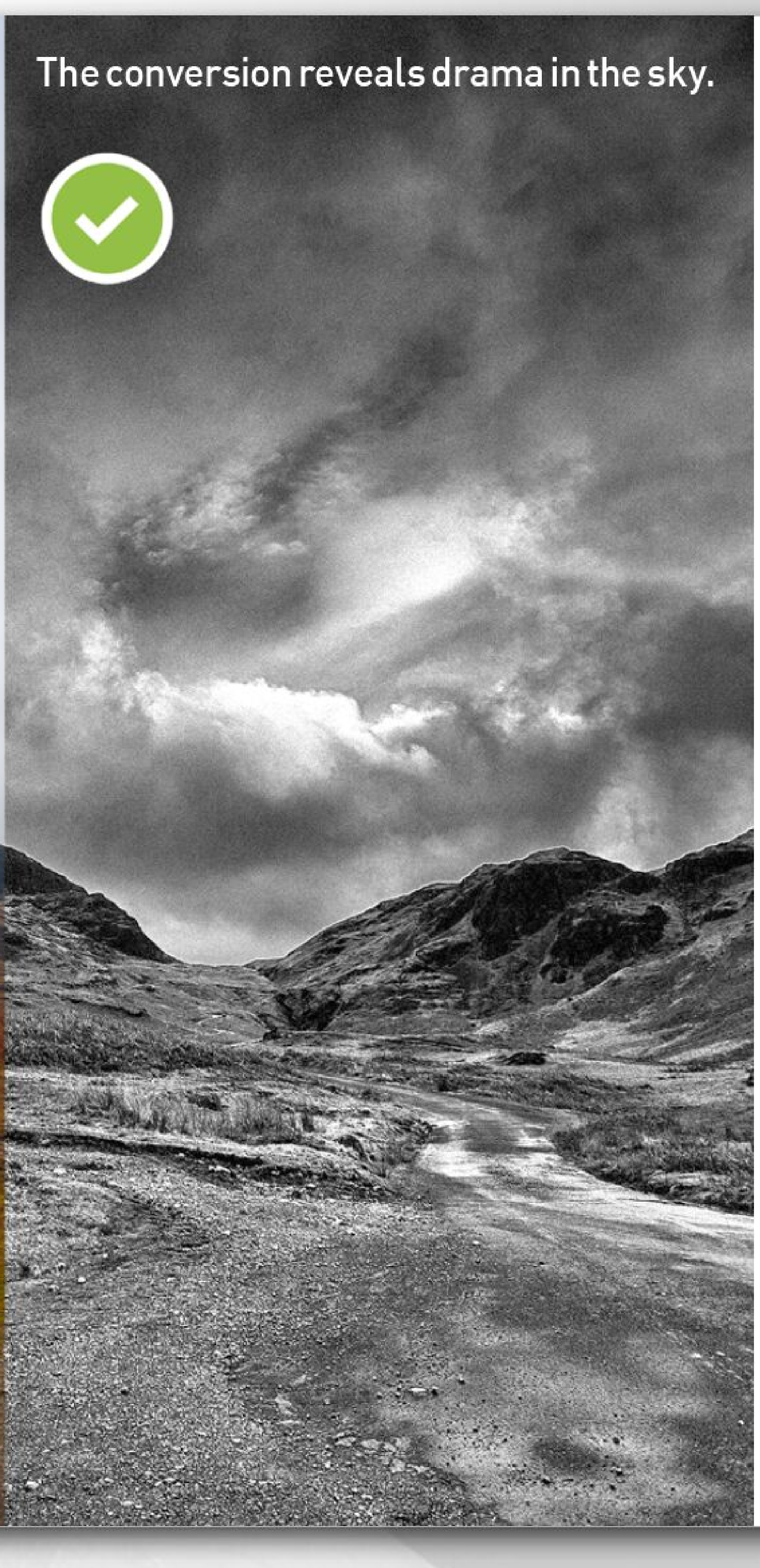
5

Consider your subject

Trying to think in black and white - that is to say, trying to visualise the scene in front of you with all its colour absent - is a good skill to try and develop. The simple question you have to ask yourself at the outset is whether the resulting image would be improved by being in black and white, or whether colour would be the best thing for it. Not every image will work in black and white. Sometimes the removal of colour can also remove differentiation between objects that could easily be distinguished were they in colour.



Original shot on a cloudy day.

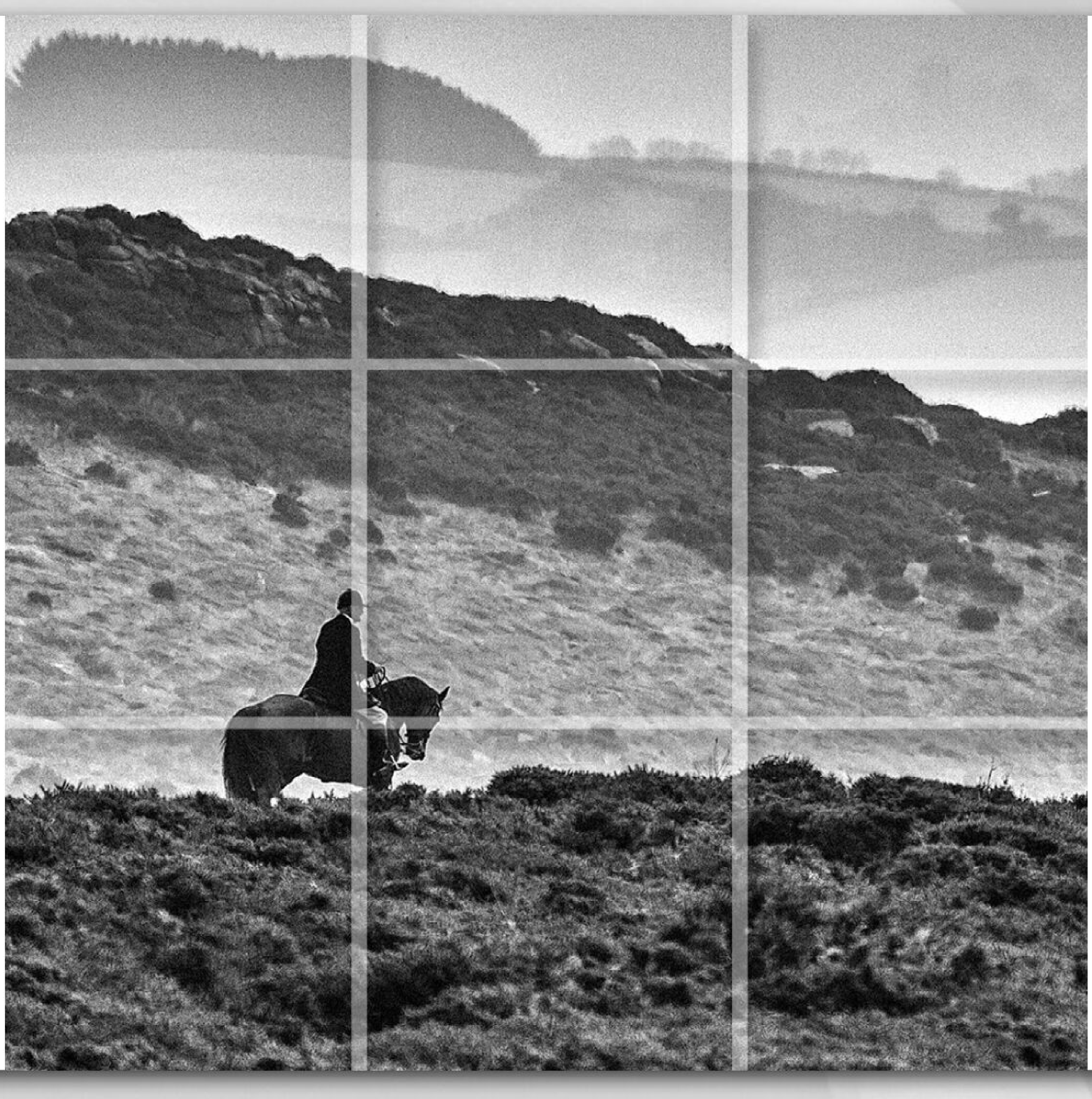


The conversion reveals drama in the sky.

6

Compose yourself

The basic rules of thumb that apply to general colour photography also apply to black and white. The rule of thirds, golden ratio, leading lines, framing and viewpoint are all well-established guidelines that can make even the simplest scene stronger with some care and attention given to the composition of the final shot. Now, having said that, sometimes rules can be broken. If you find your scene somehow doesn't conform to a standard rule, take the shot anyway. Now and again it's refreshing to shoot something 'just because...'!



CANON EF LENS
EOS
5D

7

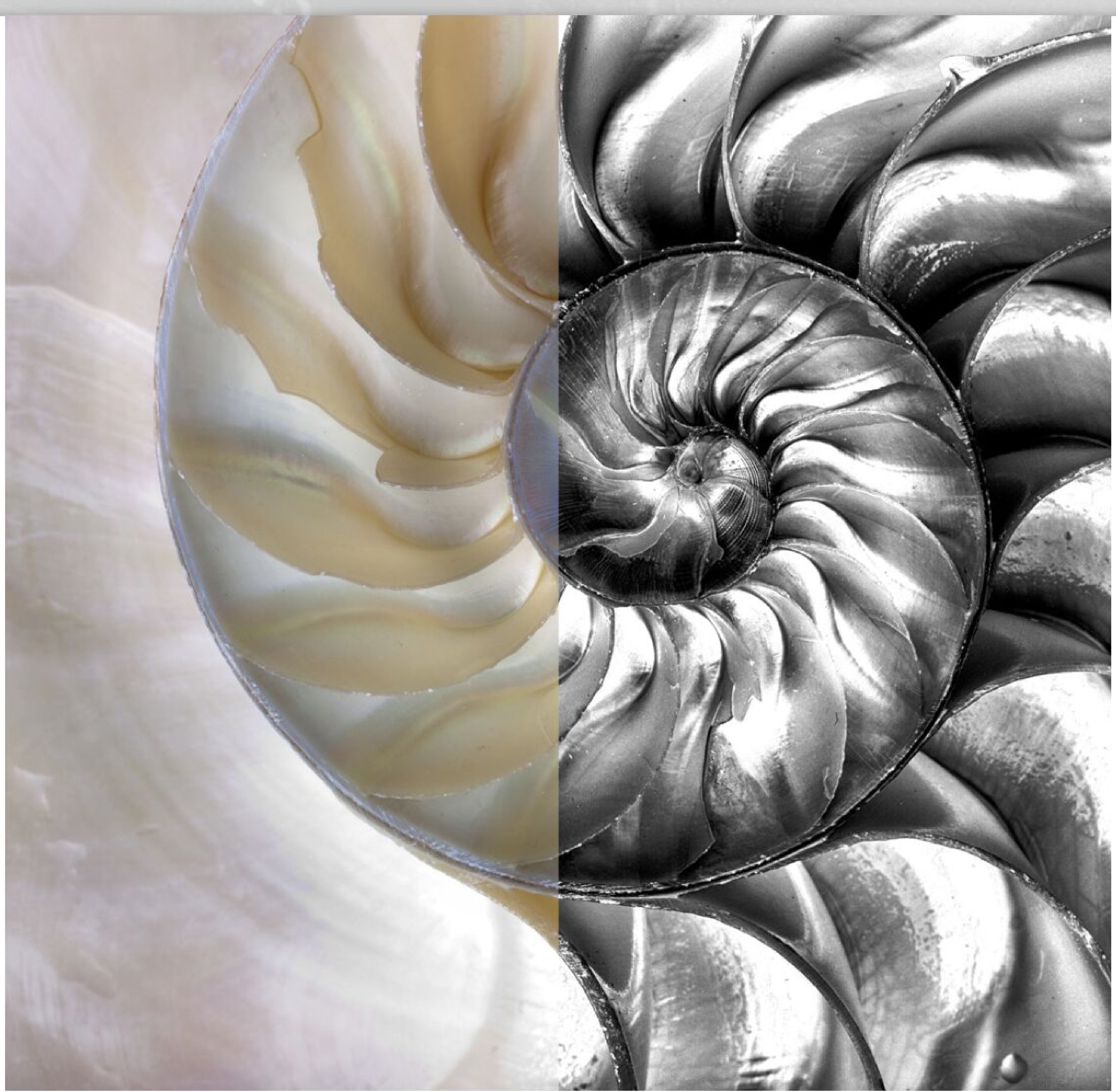
Look for shape and form

In black and white particularly, shape and form become very important to the success of the image. Converting to black and white means you can no longer rely on any colours in the scene to define or differentiate your subject from its environment. You need to be able to take the shapes, lines and forms available in the shot, and use them as the method by which the image is given an obvious focal point or object of interest.

8

Emerging patterns

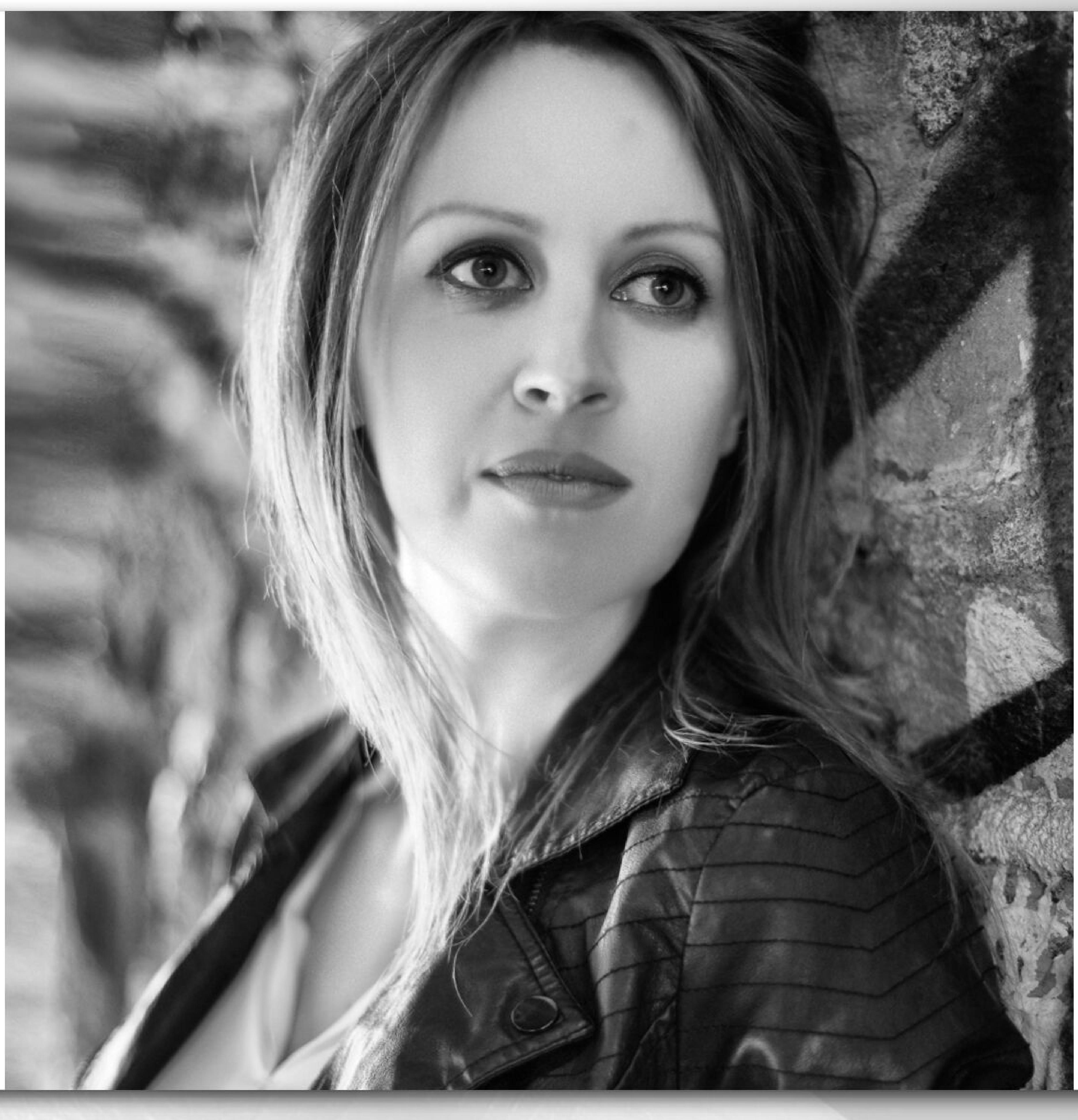
The shift from colour to black and white often reveals details that might otherwise have been hidden under the obscuring cloak of colour. Colourful items in a shot can be distracting, as we've already mentioned, sometimes to the point of masking very interesting but perhaps subtle patterns that can only be appreciated once colour is removed from the scene.



9

Texture adds interest

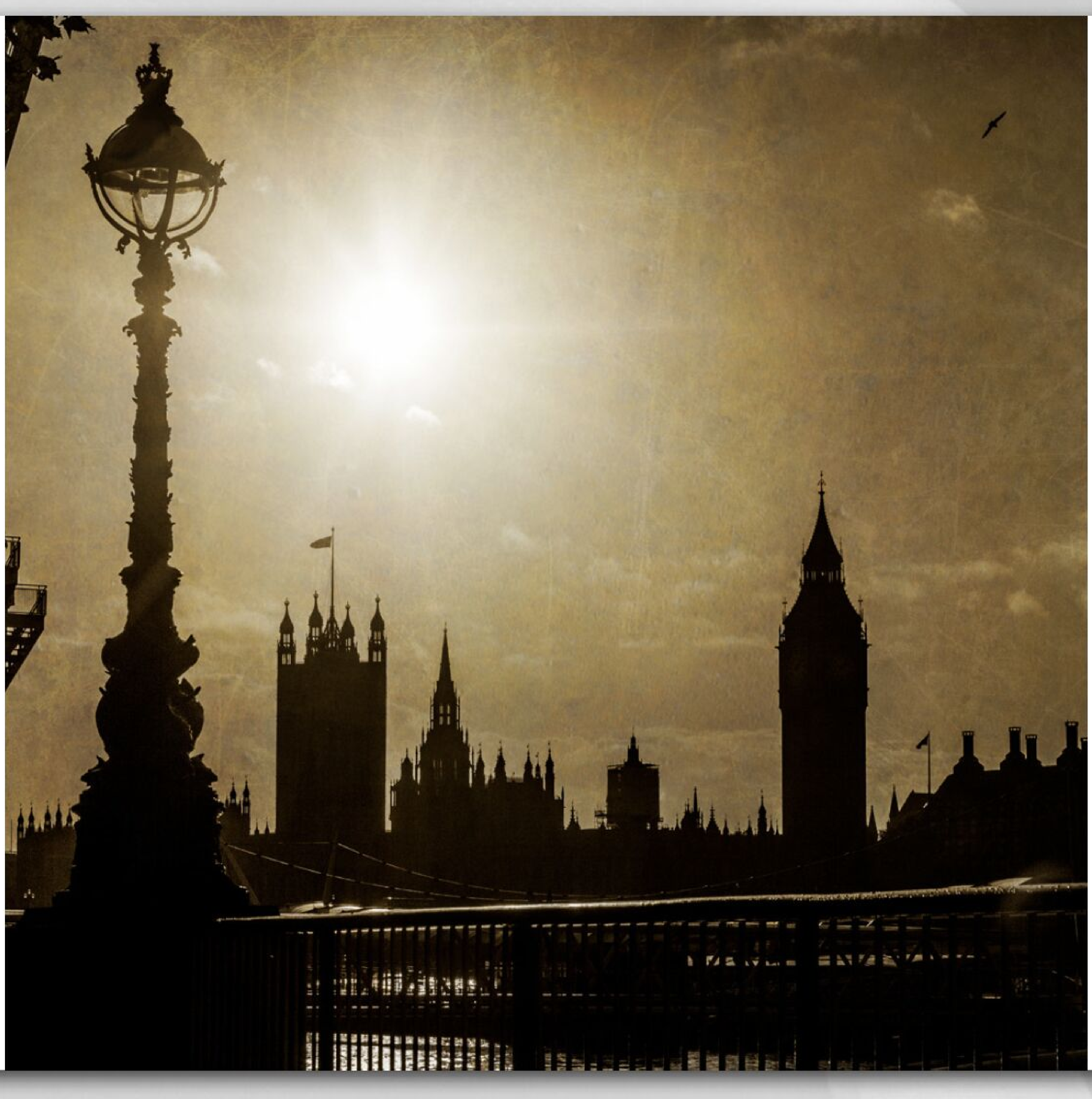
Can you imagine how flat and featureless our world would be without texture? You need to bear that thought in mind when you shoot for black and white. A mono image and texture are inextricably linked, and part of the overall success of an image depends on there being elements that can show depth, dimension and contrast. Textured objects reflect light in interesting ways and draw the viewer's eye into the scene. A combination of textures in your mono image is a winning formula. Imagine a close-up portrait of a fair skinned woman with a rough stone wall as her background. The juxtaposition of the two makes the image interesting.



10

Colour your image

Wait, what? Well, we don't mean that you should convert it back to colour. However, a black and white image does not need to be shades of black and white. Consider a duotone image where shades of black and white are replaced by shades of two other colours. Sepia toning is of course one of the main staples of the black and white image. There is also the cyanotype (the colour of the blueprint), or there is the split toning technique whereby you assign one colour to the shadow areas of an image, and another colour to the highlight areas. The results can be very exciting.



CANON EF LENS
EOS 5D

11

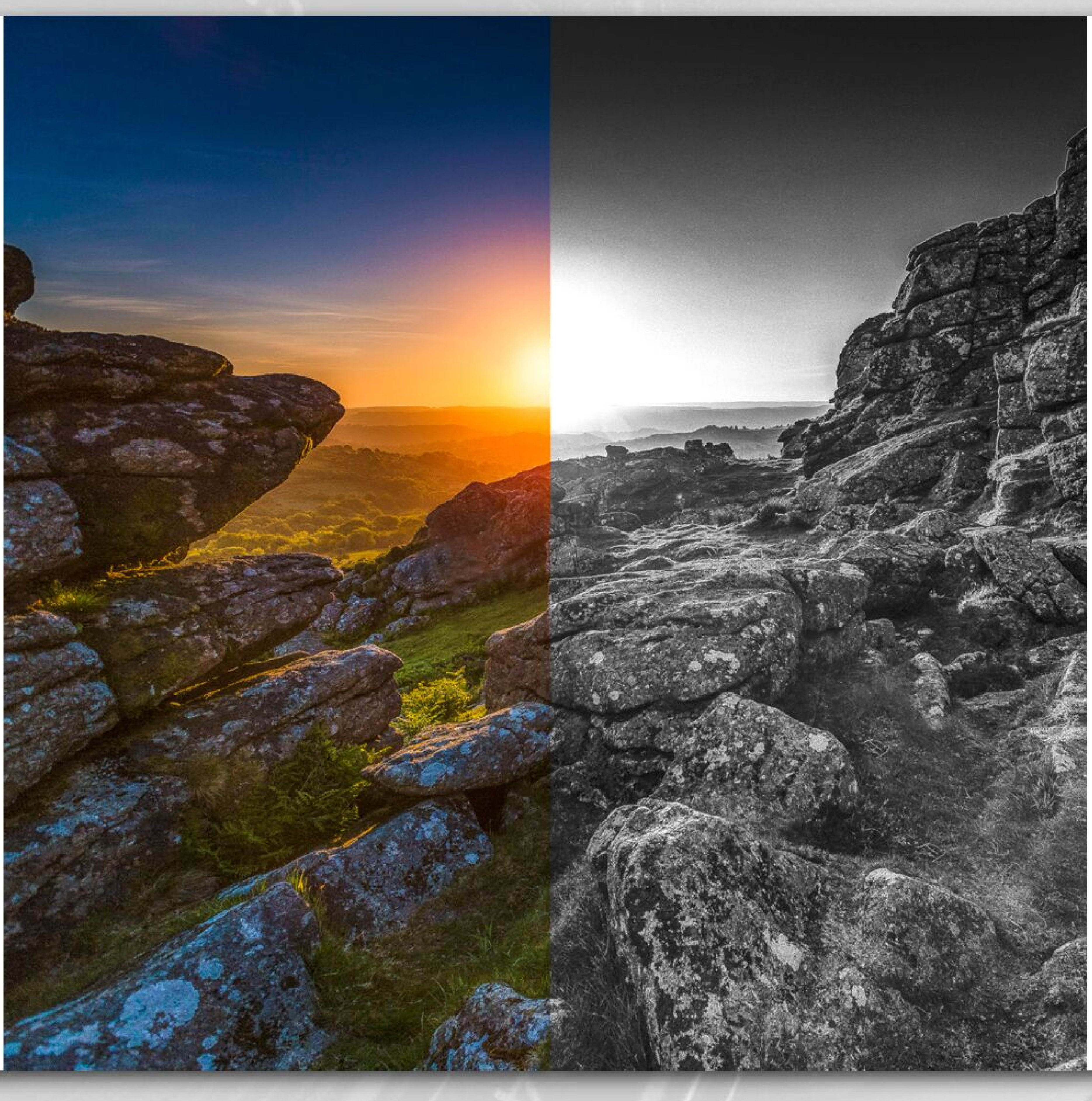
Dodge and burn

Images can be transformed by a competent mono conversion. Try not to rely on a simple desaturated image and call it done. The tonal quality of the image can be enhanced tenfold by a few simple adjustments to brightness and contrast. By using dodge (lightening) and burn (darkening) techniques in specific areas of your image, you can selectively boost brightness and contrast in shadow, mid-tone and highlight areas to improve the overall look of the image.

12

Consider HDR

A High Dynamic Range image is the fusion of three standard bracketed low dynamic range images that are combined to produce a single image that covers a much greater range of tonal values from the darkest shadows to the brightest highlights. Usually two or three stops apart, these LDR's, when fused together, capture more light data in a scene than a single shot can achieve on its own. As a by-product, you also get a lot more detail in the shots. Perfect for scenes with lots of texture that you can bring out in the conversion stage of your workflow.

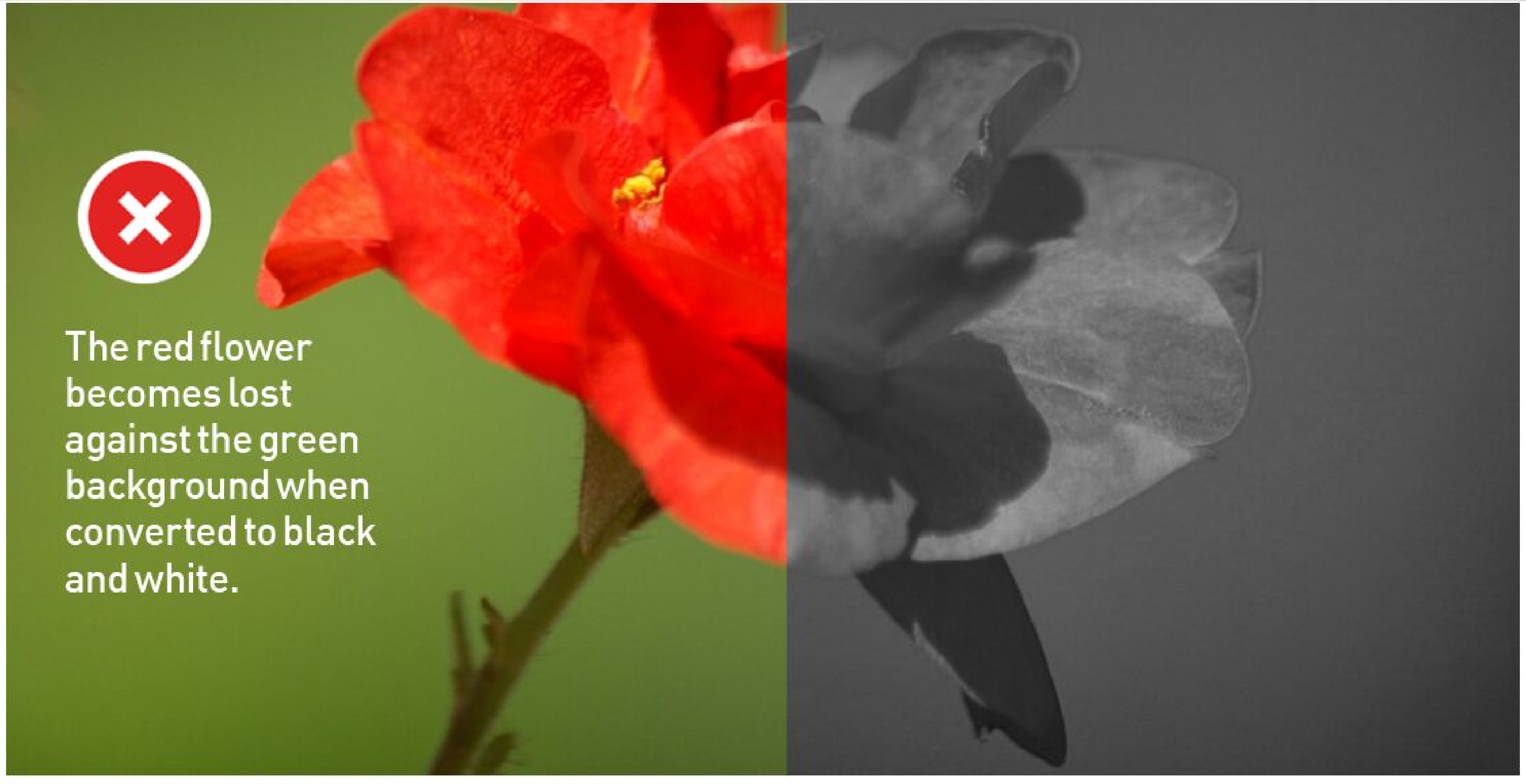


Top black and white photography tips

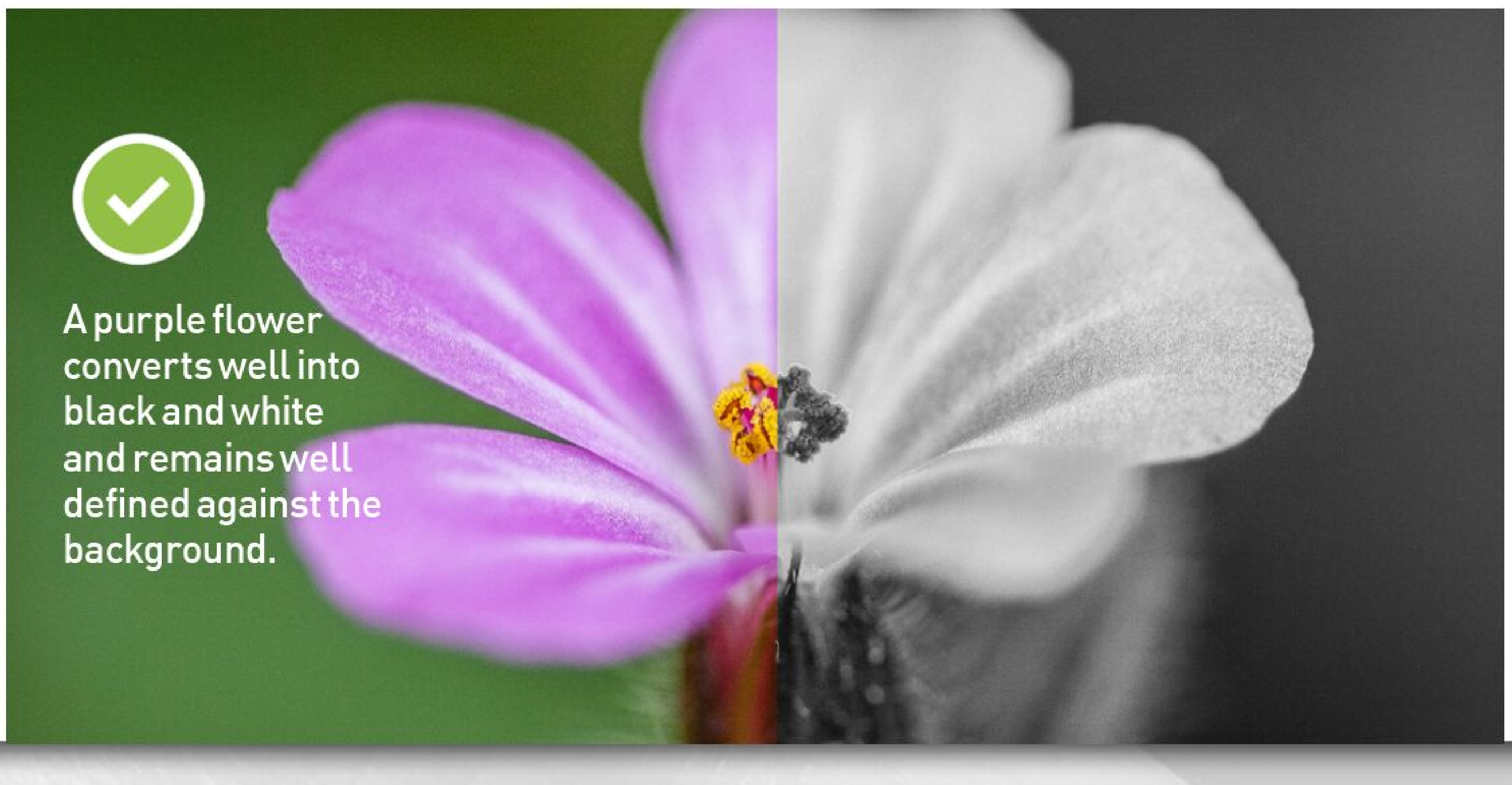
13

Colour and contrast

You'd imagine that your black and white image doesn't rely on colour or great weather for the image to be successful, although you need to be keenly aware of the differences between colour values in your objects so that they still have some distinct separation, and can be differentiated when converted. A red flower against a green background may work well in colour; but in black and white the tones can look very similar, and suddenly your flower is lost against the background.



✗ The red flower becomes lost against the green background when converted to black and white.

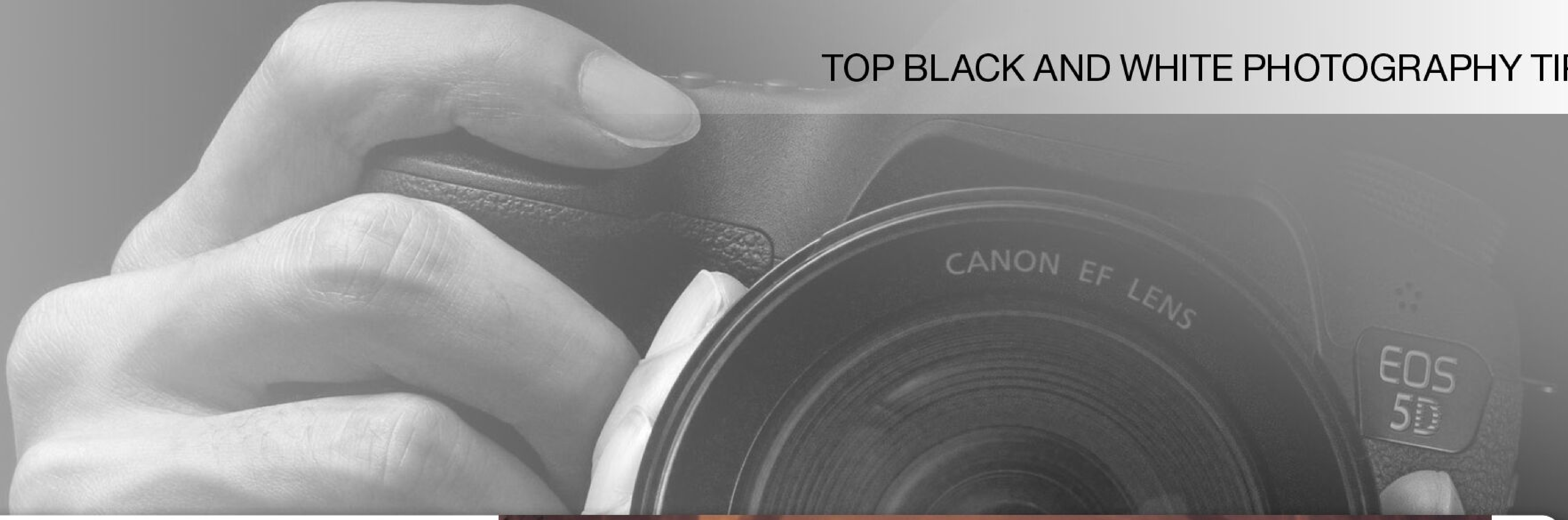


✓ A purple flower converts well into black and white and remains well defined against the background.

14

Watch the skies

Be aware that grey overcast days can produce some spectacular moody shots. However, watch out for skies that are one single tone of grey with no cloud formations showing. When converted, this will make for a fairly boring-looking sky with no real texture or interest. True, you could break out the image editing software and drop in a new sky, but try to keep as much of the final image 'in camera' as you can.



15

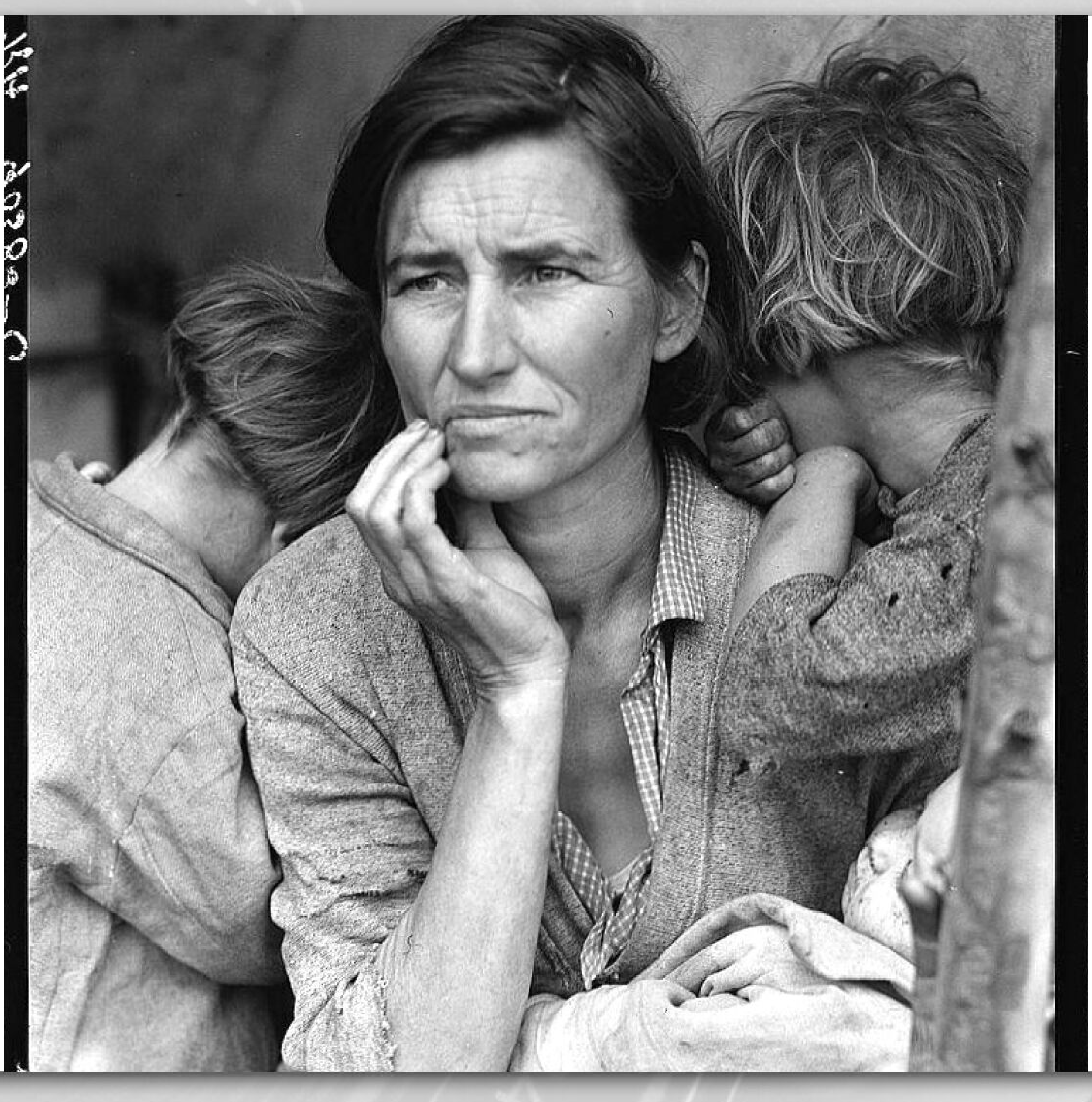
Shoot, shoot again and learn

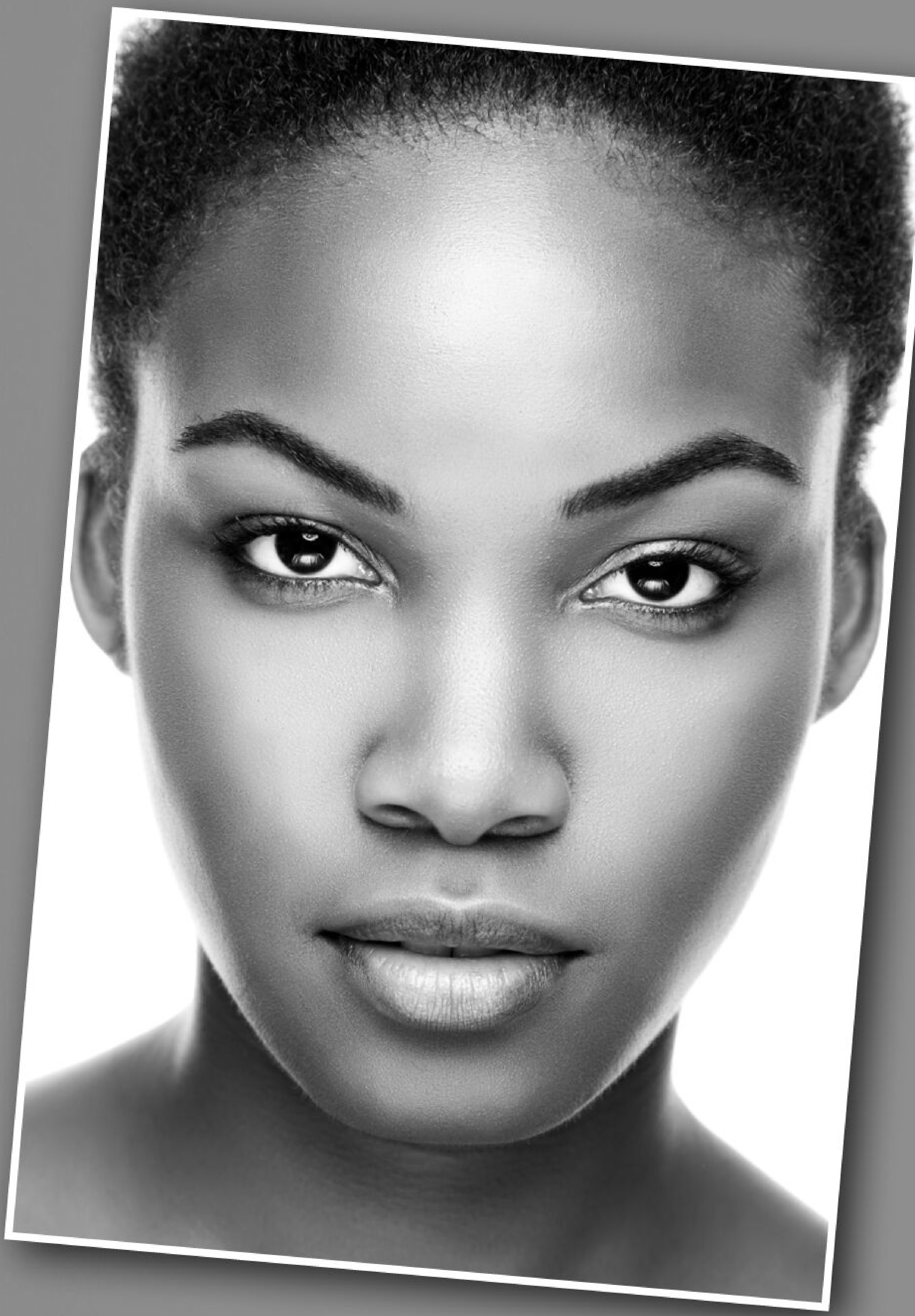
Practice makes perfect, right? The more you shoot, the wider the range of subjects you experience, and the greater variety of lighting conditions you encounter; this will all help to train your eye and your brain to be able to 'see' that perfect black and white image through a sea of colour. Experiment and have fun. You've nothing to lose, and you have the potential gain of the next 'wow!' black and white image.

16

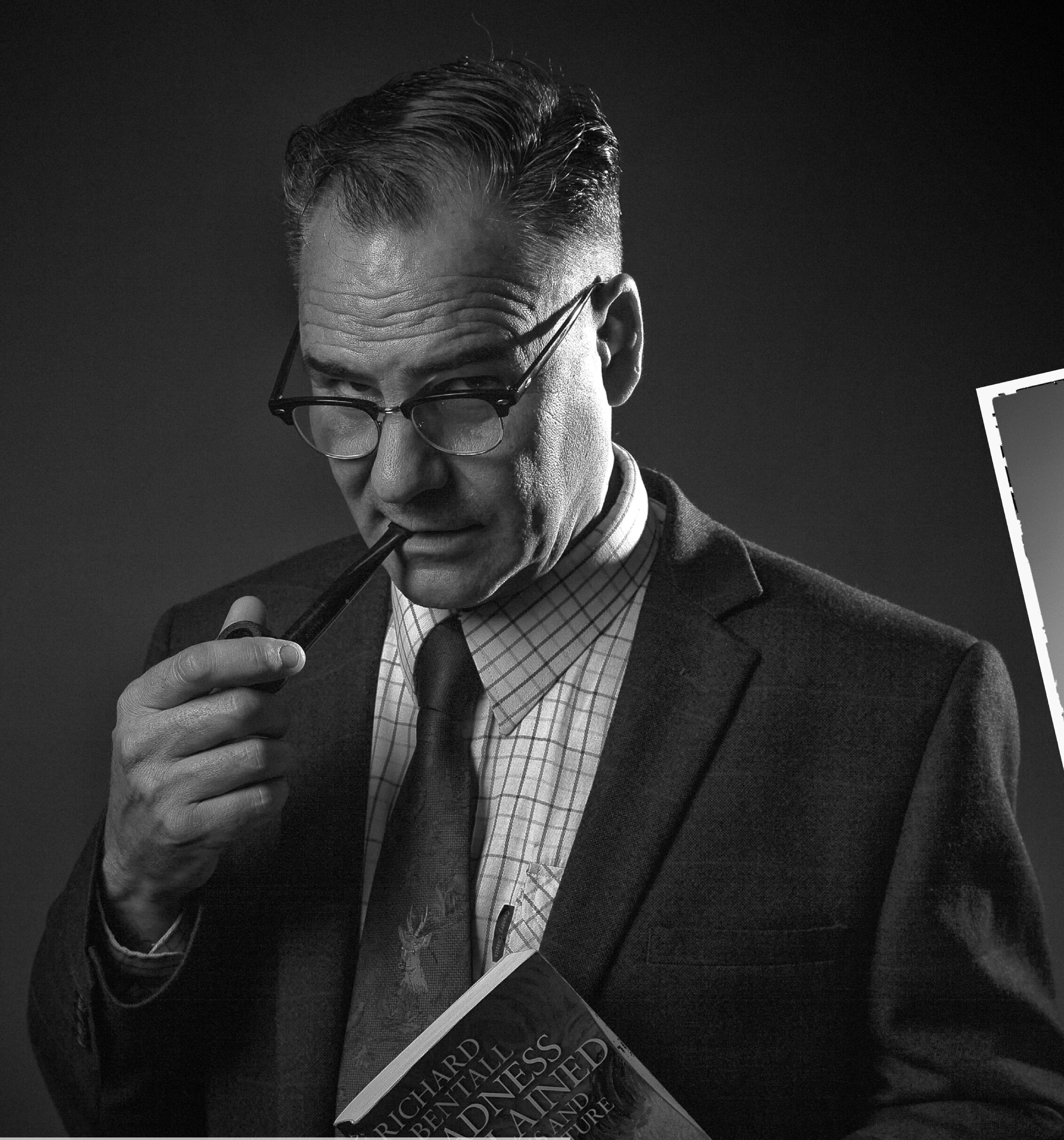
Seek inspiration

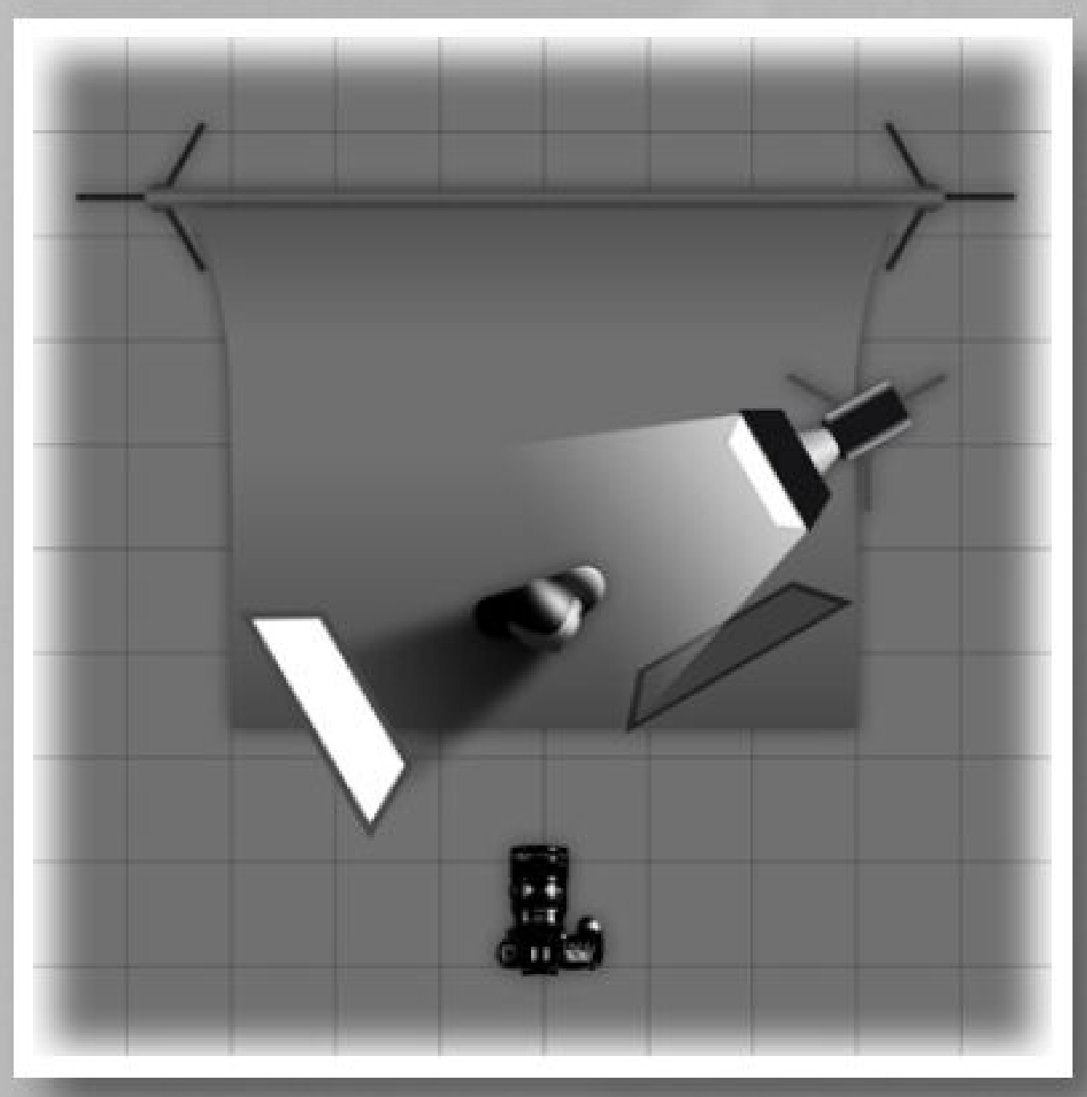
Take time to familiarise yourself not only with the work of some of the greats of black and white photography, but also your contemporaries. Flickr, the image sharing website, is a great place to gain inspiration and see what other photographers are doing. Flickr also collaborated with the U.S. Library of Congress to create 'The Commons', an expanding database of publicly accessible images where you can search and view many of the world's public photography archives. Also, try a Google search for Ansel Adams, Cecil Beaton, Richard Avedon, David Bailey and Man Ray.





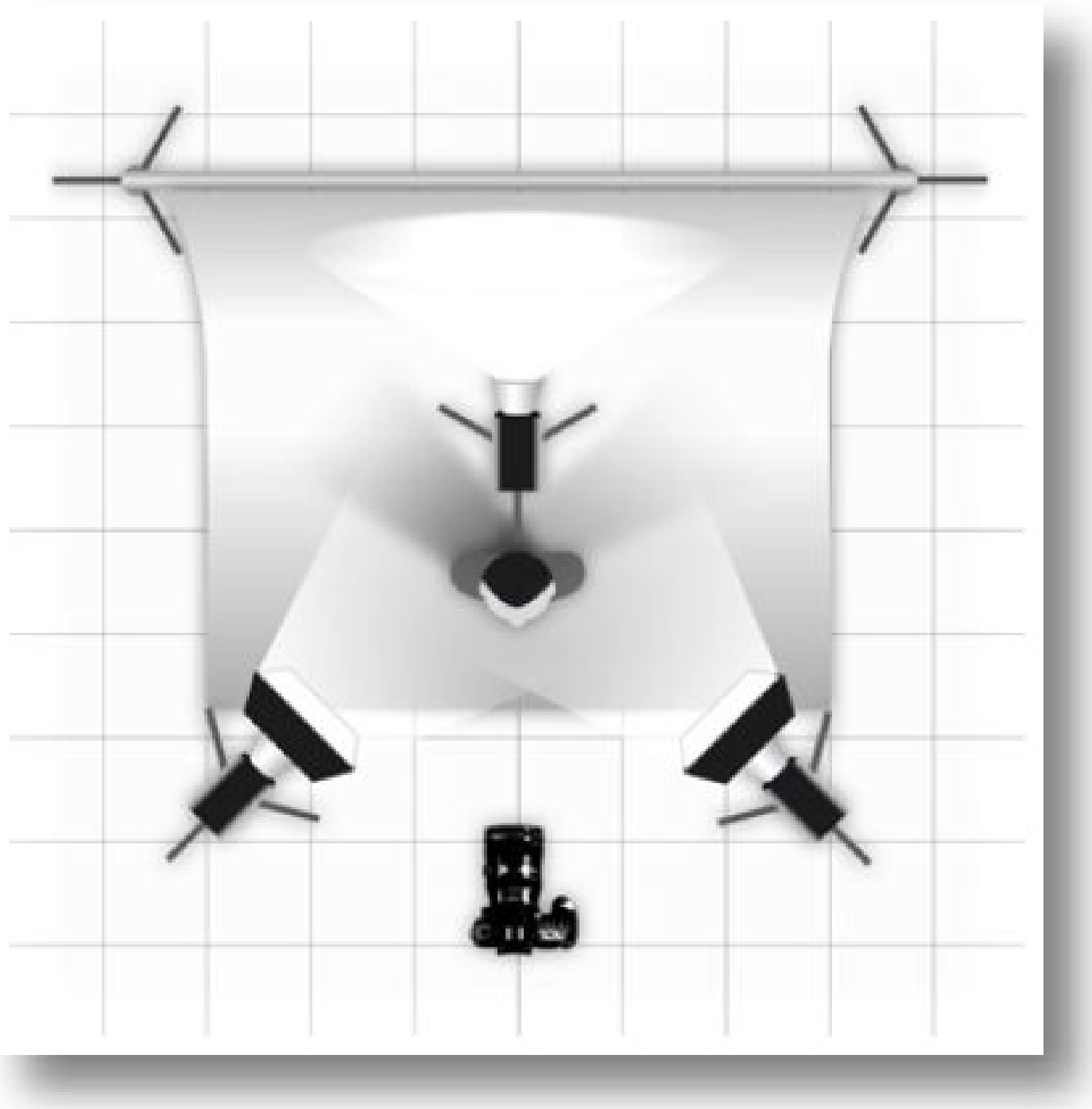
PORTRAIT PHOTOGRAPHY


RICHARD
P. BENTALL
MADNESS
EXPLAINED



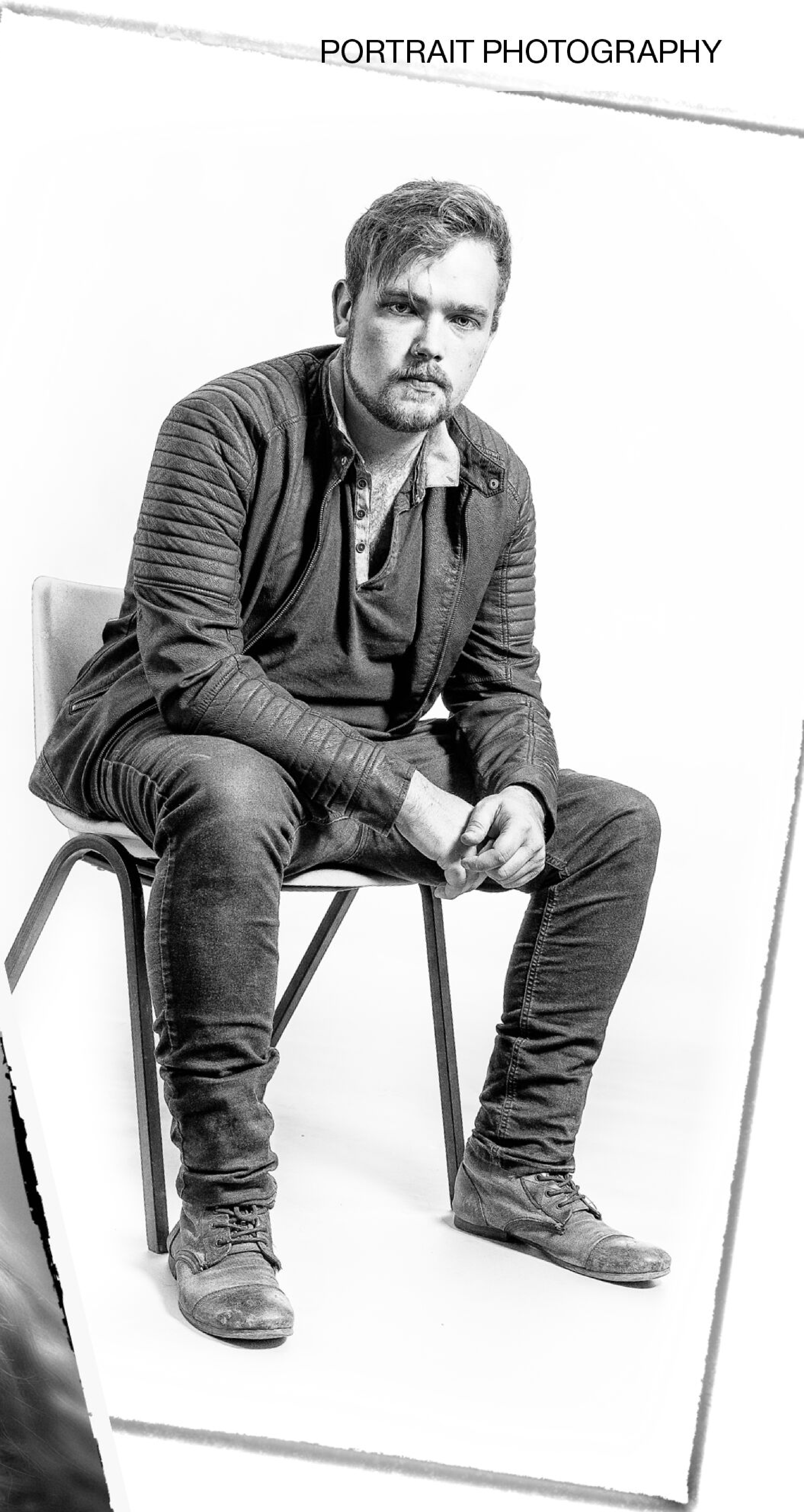
This low key portrait of Tim uses one light camera right and one reflector camera left. It is an adapted version of the short lighting portrait technique.

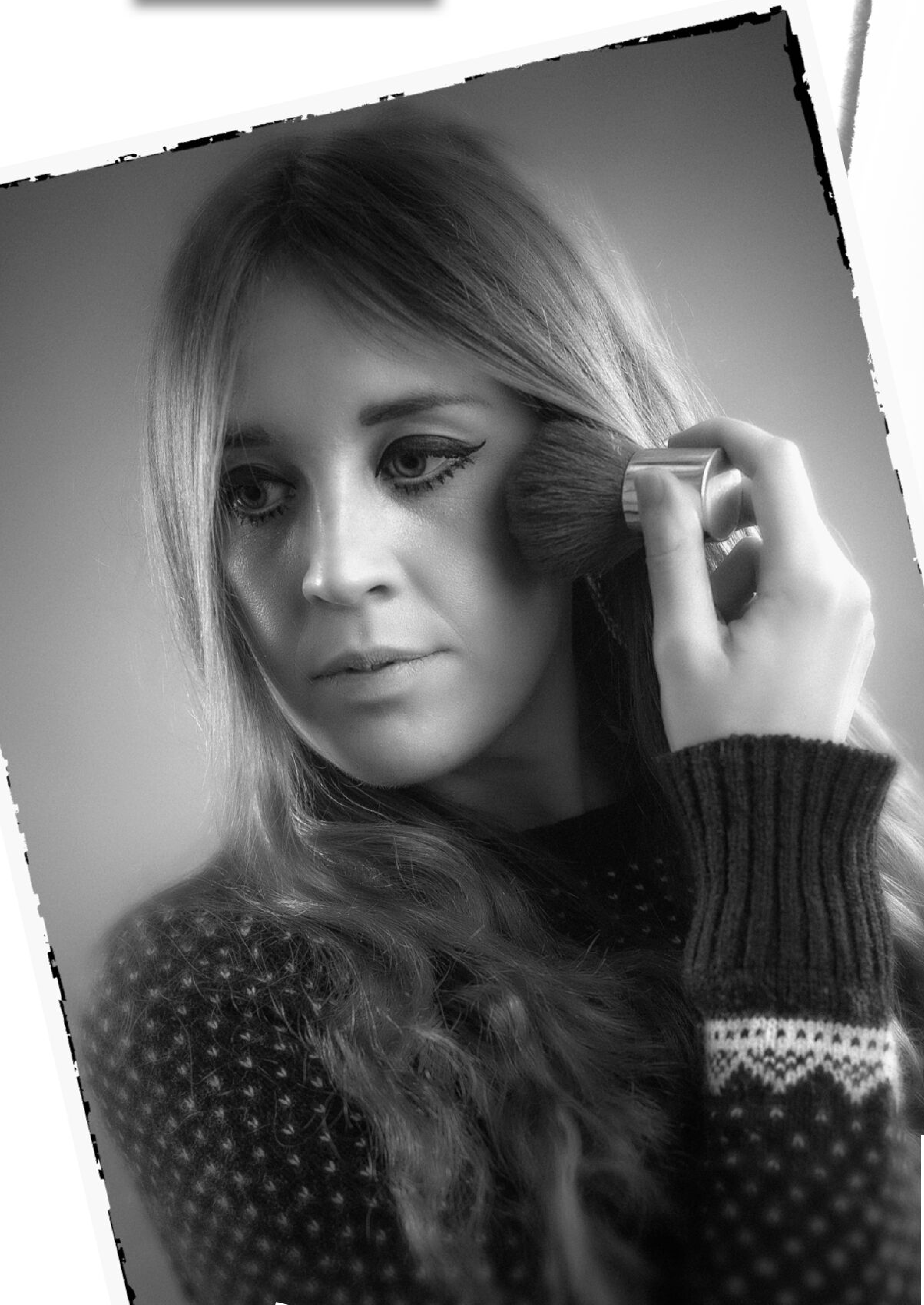
Canon 5DMK2 - EF24-105mm f/4
f/5.6 - 1/160 - ISO 100

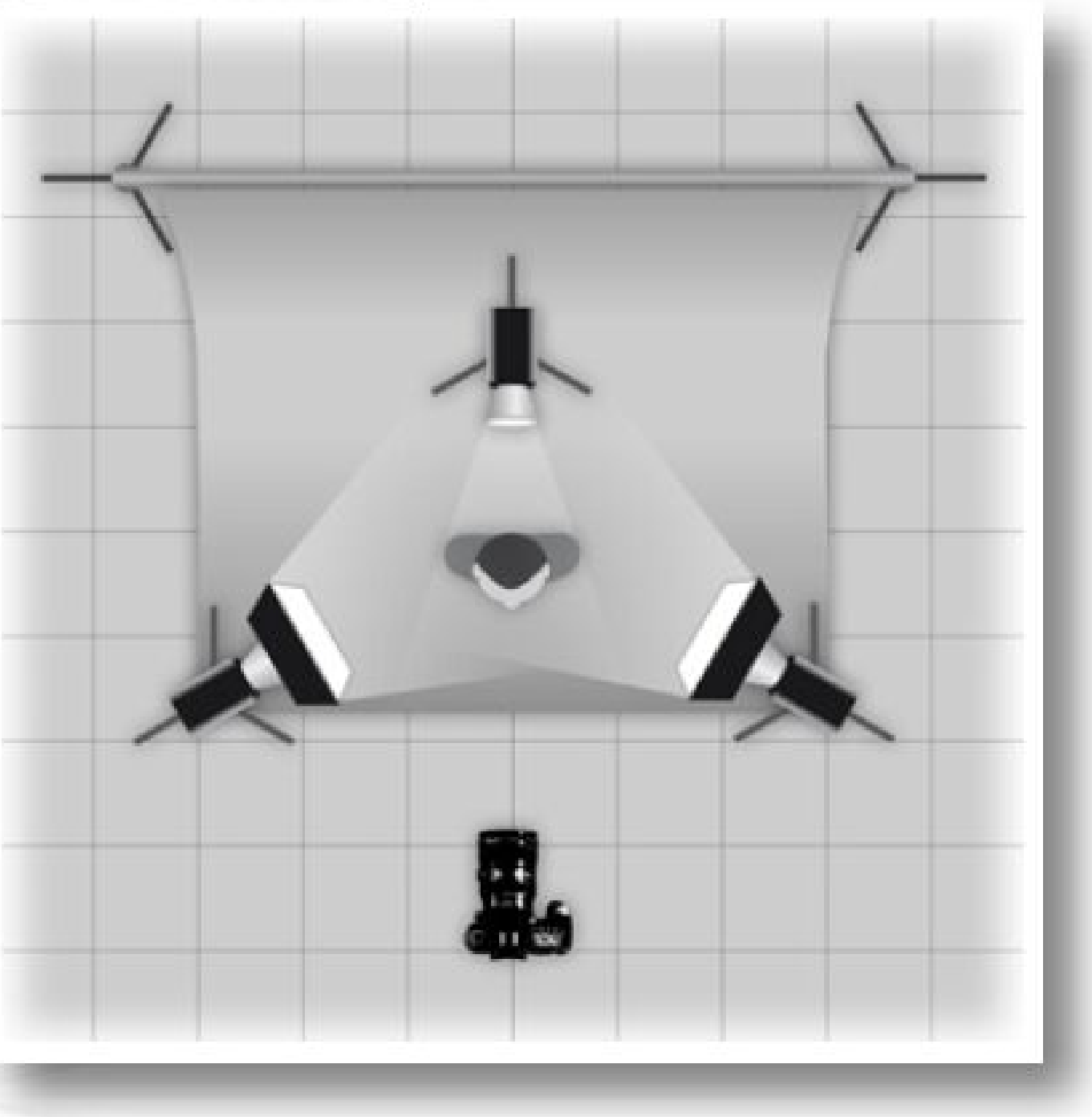


This high-key image of Oli was shot against a light grey background with enough light power to render it white. He was also lit either side by two key lights at high power to flood the foreground. High-key lighting is commonly a three-point setup. It was converted to mono where all white and mid-tone values were boosted to keep the image bright.

Canon 5DMK2 - EF24-105mm f/4
f/7.1 - 1/160 - ISO 100

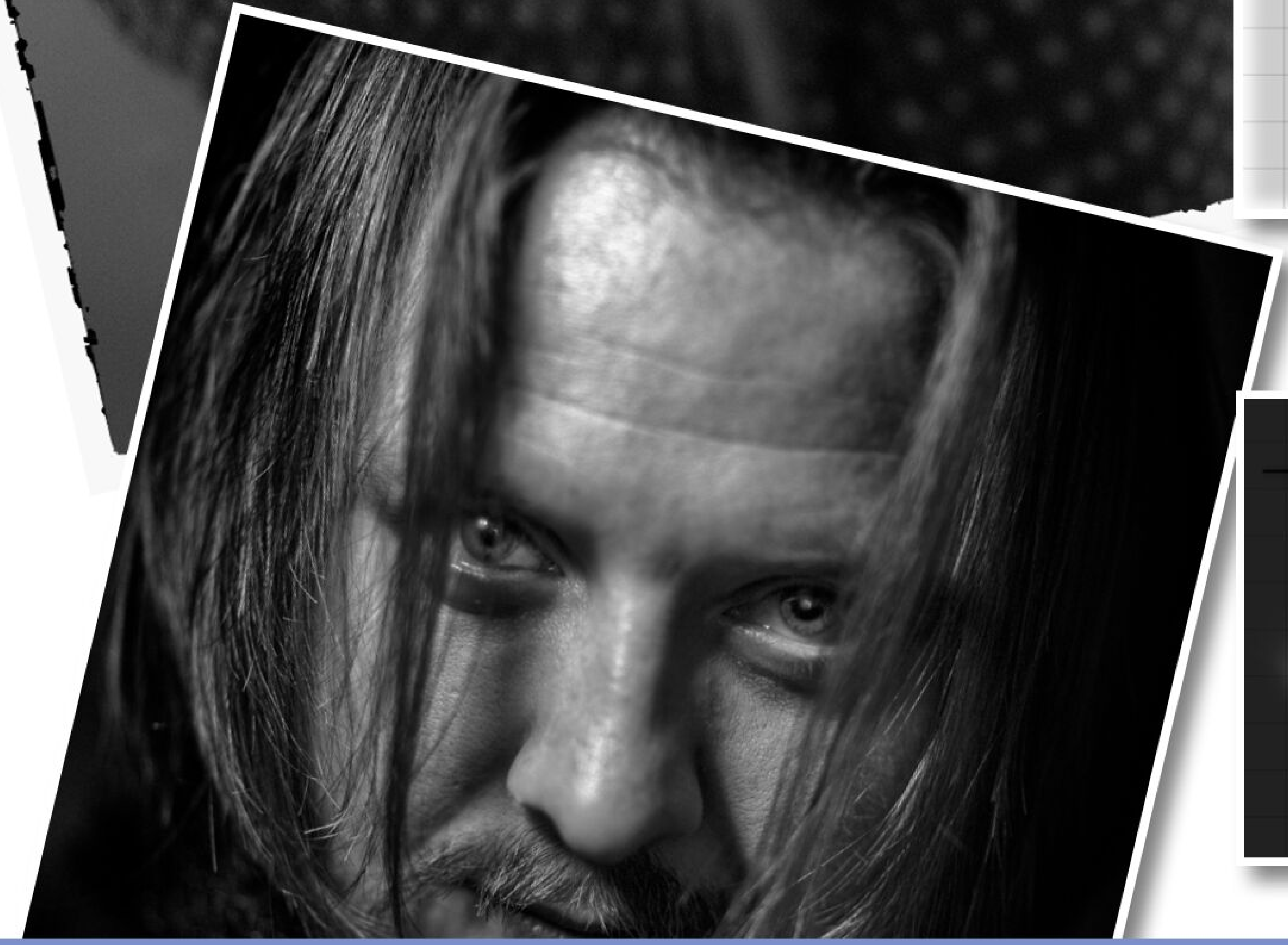


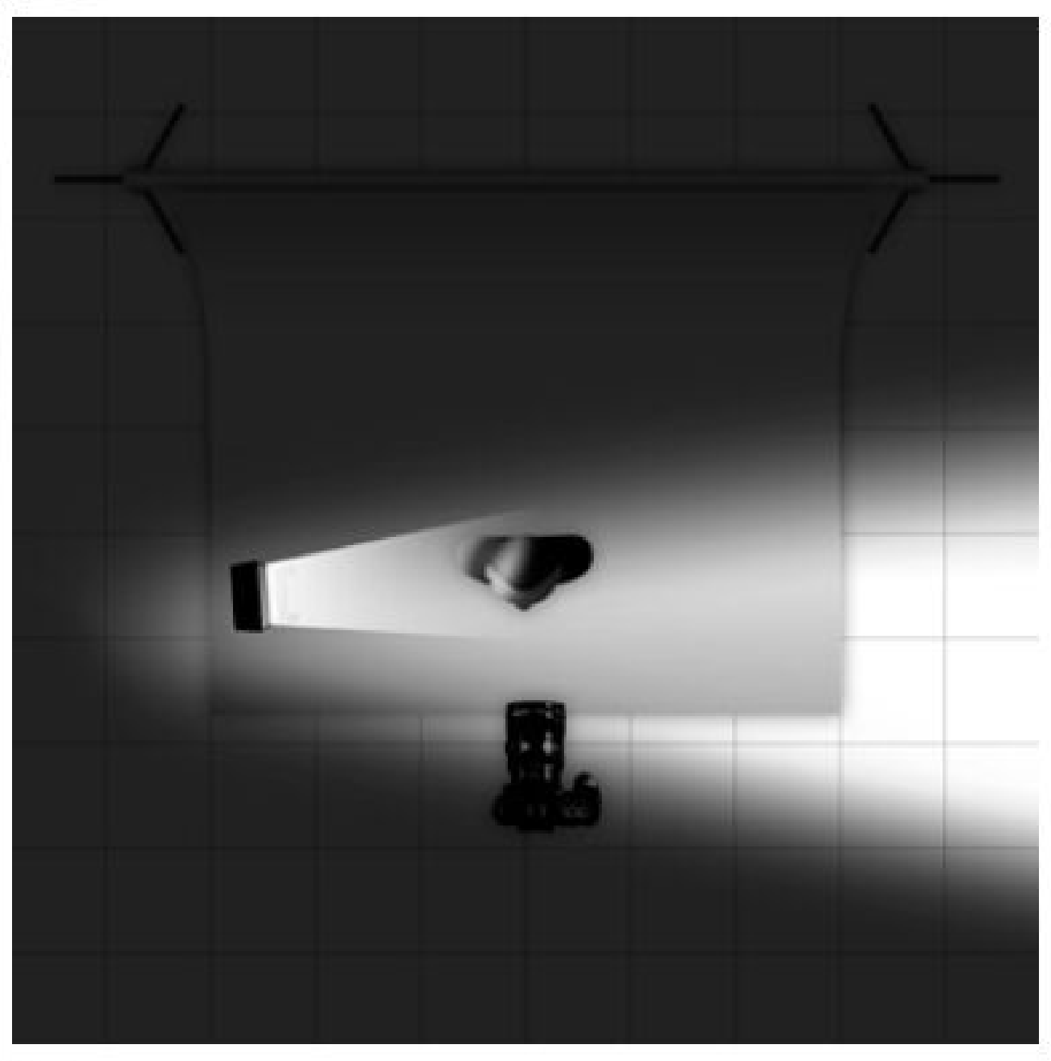




Gemma was shot with a three-point setup. The key light was to camera right, with the second light to camera left at half power. The position of both lights also provided a degree of highlights on her hair. The mono conversion was a simple desaturation and a levels adjustment in Photoshop.

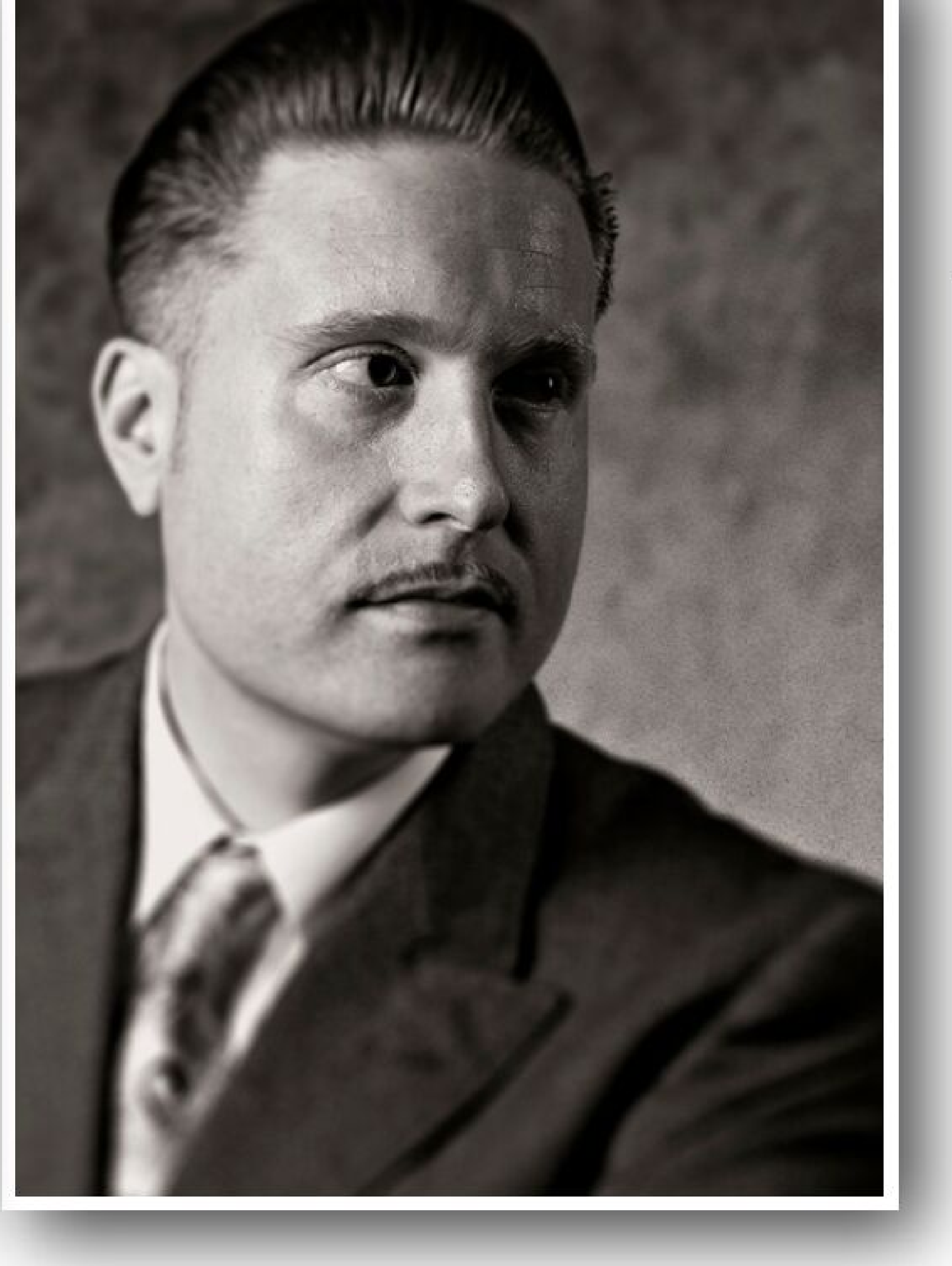
Canon 1DSMK3 - EF50mm f/1.4
f/4 - 1/200 - ISO 100





Strong side-lighting creates n ominous, moody atmosphere in this shot of Steve. The beard and long hair cast shadows that would not be flattering in a female portrait, but work here for a darker, masculine shot. The shot was very dark, and the conversion to mono was adjusted to add more contrast.

Canon 1DSMK3 - EF85mm f/1.2
f/1.2 - 1/160 - ISO 50



Two rockabilly musicians Chris (left) and Yann (far left) pose for some headshots. Apart from a standard Photoshop mono conversion, the images were also tinted for an authentic sepia-toned feel that was in keeping with their style.

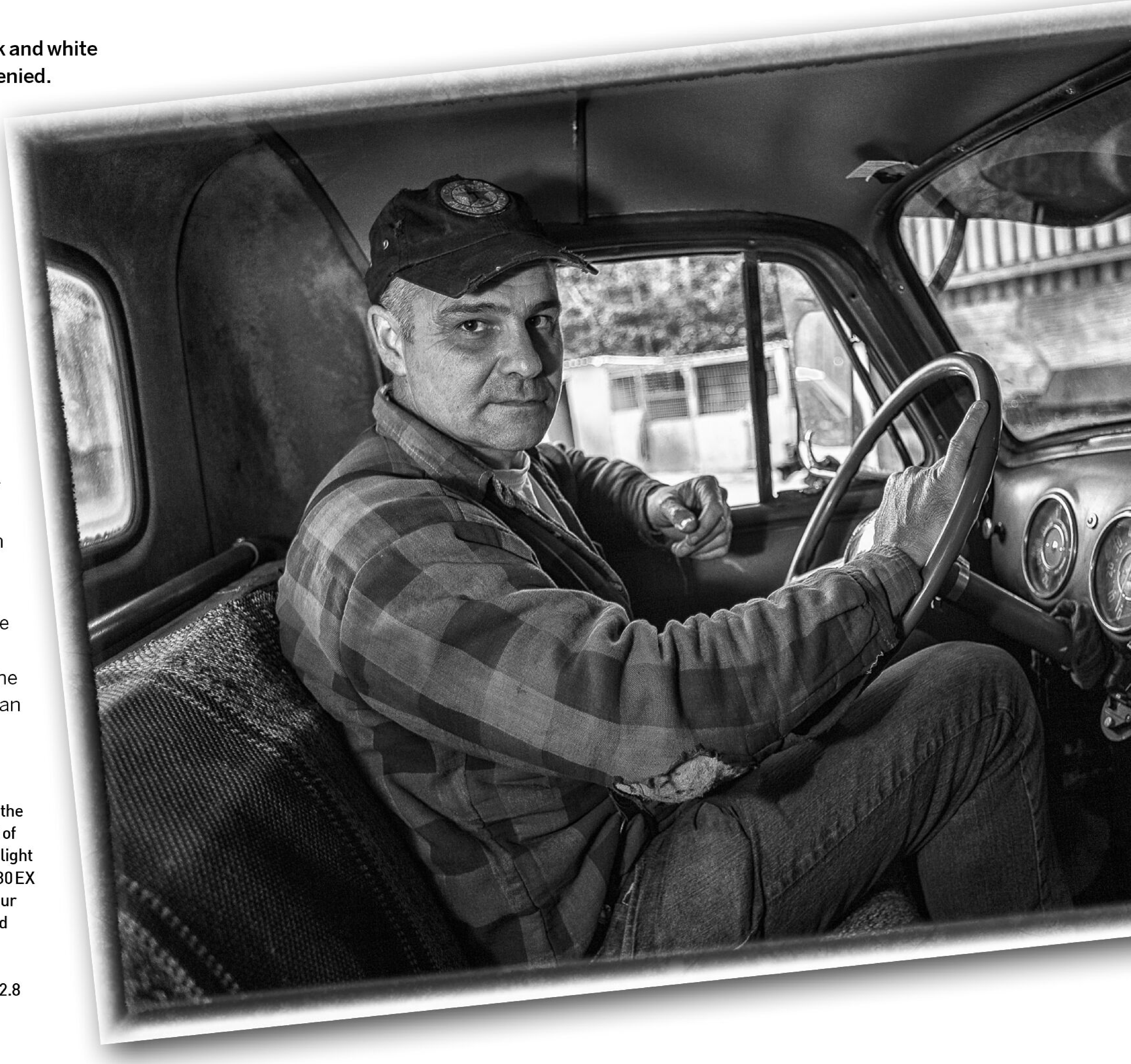
Canon 5DMK2 - EF24-105mm f/4
f/4 - 1/200 - ISO 50

Portrait photography tips

SOME GREAT TIPS TO HELP YOU PRODUCE STUNNING PORTRAITS

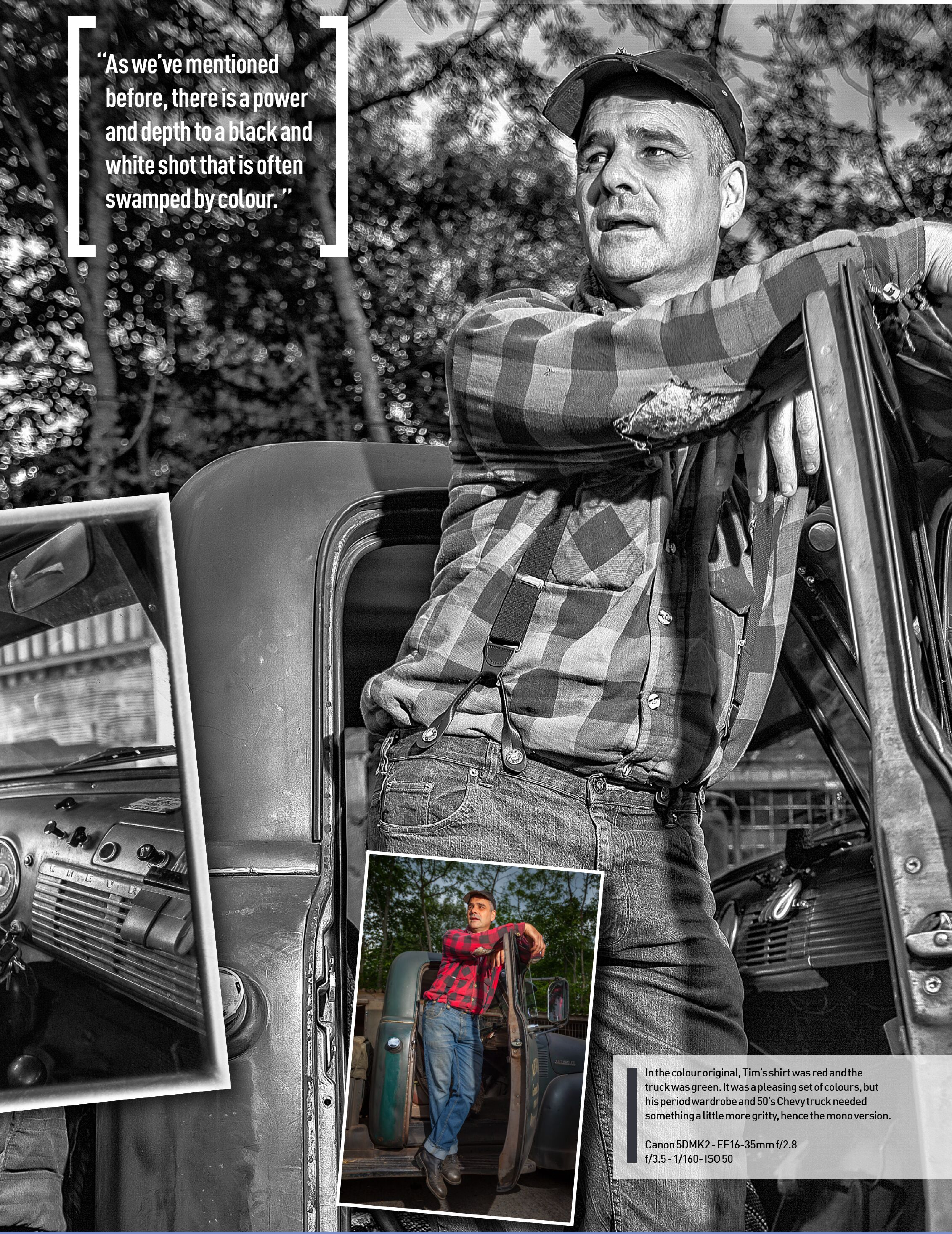
The power of the black and white portrait cannot be denied. A wise soul once said: 'If you want fashion, shoot in colour. If you want emotion, shoot in black and white.' As we've mentioned before, there is a power and depth to a black and white shot that is often swamped by colour.

The story behind a shot is easier to comprehend when it is in black and white and the distraction of colour has gone. Even if there is no real story being presented in the shot, you can suddenly find yourself paying more attention to a black and white portrait. Texture, form and tone become important to the shot. It draws you in more than a colour shot ever could. ■



Shades of Richard Avedon's 'In the American West' in this portrait of ex-trucker Tim. With available light supplemented by two Canon 580 EX Speedlites, the removal of colour gives it a more authentic, period flavour.

Canon 5DMK2 - EF16-35mm f/2.8
f/2.8 - 1/100 - ISO 200



> "As we've mentioned before, there is a power and depth to a black and white shot that is often swamped by colour."

In the colour original, Tim's shirt was red and the truck was green. It was a pleasing set of colours, but his period wardrobe and 50's Chevy truck needed something a little more gritty, hence the mono version.

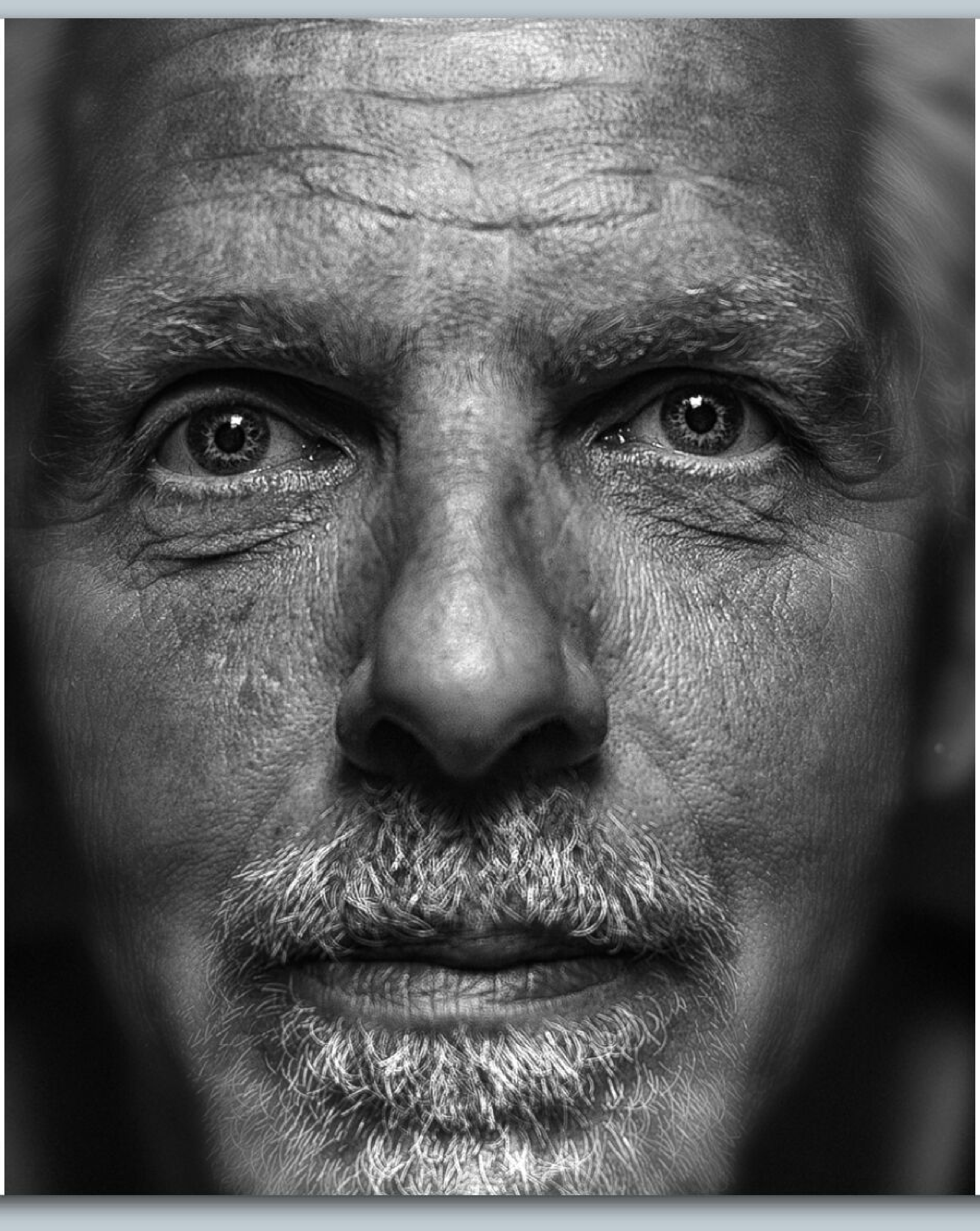
Canon 5DMK2 - EF16-35mm f/2.8
f/3.5 - 1/160 - ISO 50

Portrait photography tips

1

Eyes in focus

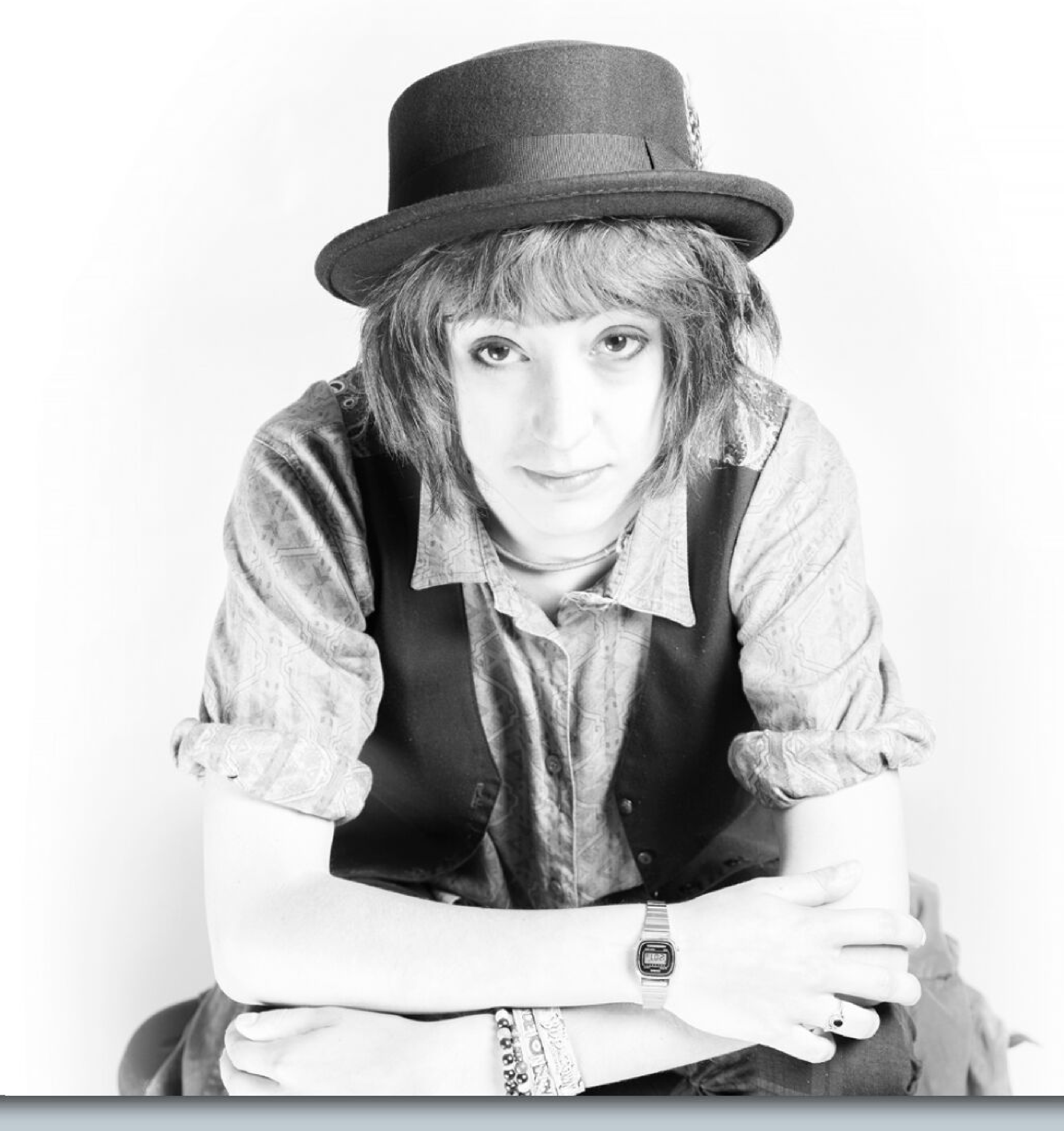
A basic rule in a close-up portrait is to have the eyes in focus. The eyes convey emotion - whether sad, happy, playful or mysterious. If the eyes are not in focus, then the connection to the subject is lost. That doesn't mean the subject must always be staring down the barrel of the camera lens. It is generally considered that if subjects are staring at the camera, they are portraying confidence or arrogance; if they are looking away, then they can be said to be nervous or mischievous. This is not always the case, but it can be a starting point in the portrayal of your subject. Even if the subject has their eyes closed, always think about making the eyes the point of focus. This can even be true when photographing non-human subjects. Dogs, for instance, are soulful creatures too, and our connection to them is through the eyes just like any person.



2

Point of view

It is quite common that nearly all portraits are taken at around the eye level of the subject. This is fine in most situations and is the staple of many portrait styles. However, sometimes it is great to change, so don't be shy in choosing other odd viewpoints. Think about getting low down and shooting up at your subject. Conversely, get up high and shoot down on your subject. Try mixing it up a little when shooting. Close-up portraits are fine, but perhaps there is a great shot to be had in a full-length portrait. Trying both landscape orientation and portrait orientation is also good practice. Don't be afraid to experiment; you never know what you will discover.



3

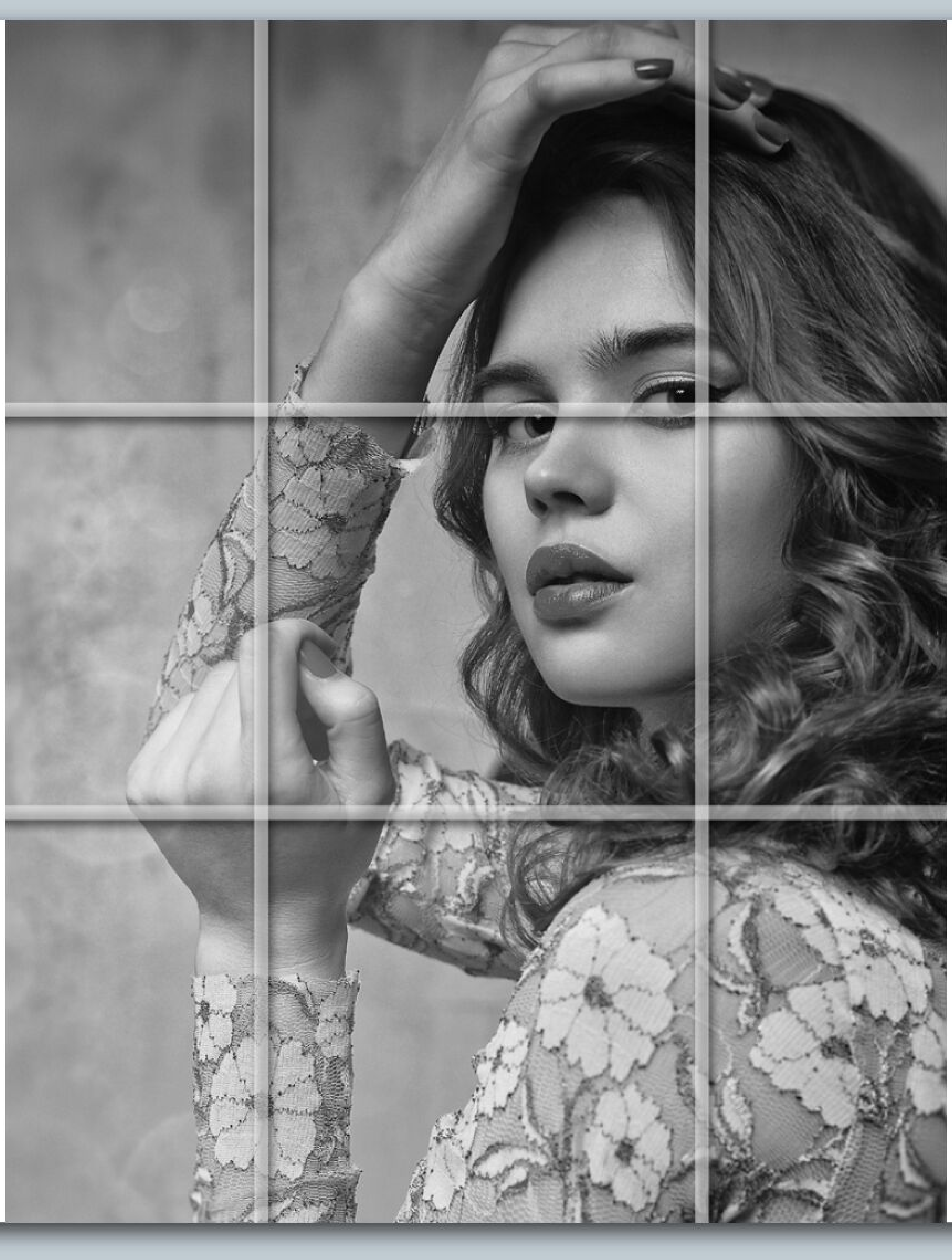
Location

The location is also important. If you shoot in a studio with a plain backdrop, then the story is told only by your subject's face. If you shoot on a location, then it too can help convey emotion or a context. Shooting a portrait of a fisherman on his trawler or a solitary guy propping up the bar are examples of how the location can expand upon the story being told. It can be argued that a subject on their own, in close-up with no background, is a head-shot; a subject photographed in an environment that is part of the storytelling, is a portrait. A subtle distinction, but perhaps true.

4

Composition

We have mentioned composition already, but it is worth mentioning again. Good composition can improve your shots in very subtle ways. Just where and how the eyes are placed within the frame of the shot, for instance, can add to the feel of the final image if they comply with the rule of thirds. There is conventional wisdom that states that a subject must have room to 'look into' a shot. Meaning that if they are looking left, the left of the shot has more empty space than the right. Now having just said all that, it's tempting to consider that rules are meant to be broken. Sometimes, odd placement of your subject in the frame can create a sort of visual tension that gives depth to the meaning of the shot. Having your subject's face dead centre can be quite a strong visual hook. You could also just have them barely in frame with one eye just keeping inside the border of the image. Who knows? You can have a bit of fun with your compositions and find an image that creates real wow factor.



5

Lighting

Lighting is an interesting subject when shooting portraits for black and white conversion. There are so many different styles out there, it would be folly to try and pigeonhole one as being better than another. Light is there only to illuminate the story being told, or the emotion being captured. Just keep in mind the basics of lighting such as trying to avoid shooting in direct sunlight, as it creates harsh, dark shadows with no detail in them. Using a large white surface to reflect light back on to your subject will create a fill light that can lessen dark shadows. Alternatively, move to a more shaded area. If possible, avoid shooting with a camera-mounted flash, as you run the risk of getting ‘red eye’; this is where the light from your flash bounces of your subject’s retina back into the camera causing the pupils to look red.

6

Manual Mode

If until now you’ve been a ‘fully automatic’ shooter, it’s time to get into manual mode and out of your comfort zone. If you are working in consistent lighting conditions, on a sunny day or in a controlled environment with studio lights, or constant artificial illumination, choosing manual settings will present no problems. Just choose a group of parameters that yield the kind of exposure you want and shoot. Shots will be more consistent this way, as your camera won’t be second-guessing every exposure every time and altering settings without you knowing. Also, try using just one centre AF point, rather than letting the camera decide. This method of single AF ‘focus and recompose’ is a great place to start losing the habit of letting the camera make the choices. Only if you are using insanely shallow depth of field would ‘focus and recompose’ present an issue.

Fotoflex
Fotoflex

7

Lens choice

Also, give some thought to the lenses you use. Wide-angle lenses are not considered appropriate for close-up portraiture as they distort the features; but a good 50mm, 85mm or even 135mm prime lens is used for portrait work. Watch out for too much depth of field; it can be a great distraction for your background to be as sharp as your foreground. A little blur in your background is a great way to separate your subject from their surroundings, keeping them the focus of the shot. Also, keep your eyes peeled for the classic error that can crop up, where an item in the background appears to be sprouting out of the top of your subject's head.

CANON LENS EF 85mm 1:1.2 L II USM
85mm
CANON LENS EF 50mm 1:1.2 L USM
AF
MF
50mm

8

Why prime lenses?

Fast glass is much prized in the world of portraiture. Fast glass refers to the fact that a particular lens is capable of shooting at very large apertures, letting in more light and offering faster shutter speeds in low-light conditions. As mentioned in the last item, a good portrait lens that has a maximum aperture of f/2.8 - f/1.2 is fantastic at creating the background blur so sought after by photographers. The quality of defocussed light this blurring produces is referred to as bokeh (pronounced boh-keh). The ability to shoot at f/1.2, for instance, means you can shoot more natural light portraits, without the reliance on strobes. Prime lenses from 50mm focal-length and up are the best choices. Because of their simpler lens configurations, image quality is better and they offer larger maximum apertures over their zoom counterparts.

640 WS
B1600
ALIENBEES

Using flash, studio lights and modifiers

LIGHTING GUIDANCE FOR YOUR BLACK AND WHITE PHOTOGRAPHY

If you find you are getting serious about shooting portraits, but you have been limited to shooting with available light only, why not consider getting yourself a couple of flashes? The ability to control your own lighting is key to adding an extra level of creativity that shooting with ambient light alone can't offer. There is a saying that if a serious photographer is shooting a portrait with ambient light alone, and standing next to him is a complete amateur with a similar camera and lens setup, chances are high that they could produce broadly similar shots (we will forego the fact that chances are equally high the amateur's sense of composition and ability to focus accurately may have a bearing). The fact is, you may find you need something extra to separate you from the casual photographer. Flashes are a relatively inexpensive way to start your journey.

When you take a shot, the shutter opens, the flash fires, the shutter closes. That is a huge over-simplification but it is important to note that you have just taken two exposures. When the shutter opens, the camera records any ambient light as well as the illumination provided by the flash. Now, depending on your settings, environment and flash output, the amount of ambient light may be very noticeable or barely perceptible. If you shoot indoors in a dark room it stands to reason that the amount of ambient light will be low or non-existent and the illumination for that scene will only come from the flash, unless you alter your shutter speed to an extremely long exposure setting. However, shutter speed does not affect the flash output during the exposure as it delivers the flash instantaneously. Another factor you need to be aware of is synchronisation.

Cameras and flashes are limited by the speed they can operate together. At shutter speeds higher than about 1/250 of a second, the synchronisation of the flash output and the shutters fully uncovering the sensor at the right moment starts to break down. Faster shutter speeds mean that you start to capture your shutter mechanism before it has had time to move out of the sensor's way, and this is recorded as a black bar on your shot. Push the shutter speeds higher and this black bar creeps higher into the image as flash and camera go further out of synchronisation. Bear this in mind when using flash. You will need to work on, or below, the recommended sync speed of your camera/flash setup.

Flashes are great; many are very cheap. They can provide a light source in very dark situations when there is not enough light to give you any useful camera settings to reliably capture an image. The main drawback with a flash, particularly if it is mounted to your camera, is that because the flash head is a very small light source, shadows tend to be quite harsh and your subject will often have the telltale 'rabbit in the headlights' look. Getting your flash off the camera, either via a wireless trigger, or an off-camera sync cord, is a key first step to avoiding the bleached, harsh-shadowed look of your shots. You can bounce your flash off an adjacent surface, such as a wall or ceiling. This surface becomes the new, and larger, light source. The main factor that governs shadow softness, is the size of the light source and its distance from the subject. Softer shadows require a larger, closer, light source in order to soften the transition from deep shadow, to a fully lit area.

That is all good information. However, you will not always have a surface to bounce off, and this is the moment you could consider lighting modifiers for your flash. A lighting modifier is just that. It is an object, surface, or material that alters the way the light travels from its source to the subject. If you shoot with an un-modified flashgun, the light that is emitted is traveling in a concentrated beam from a very small light source. If this light passes through a modifier, such as a softbox, the light is diffused, scattered and less concentrated. A modifier can also turn a small light source into a large one. A flash, fired from several feet away onto a large translucent material, for instance, creates an illuminated hot spot that is much larger than its source. This is the basis of light modification, so read on for more details. ■

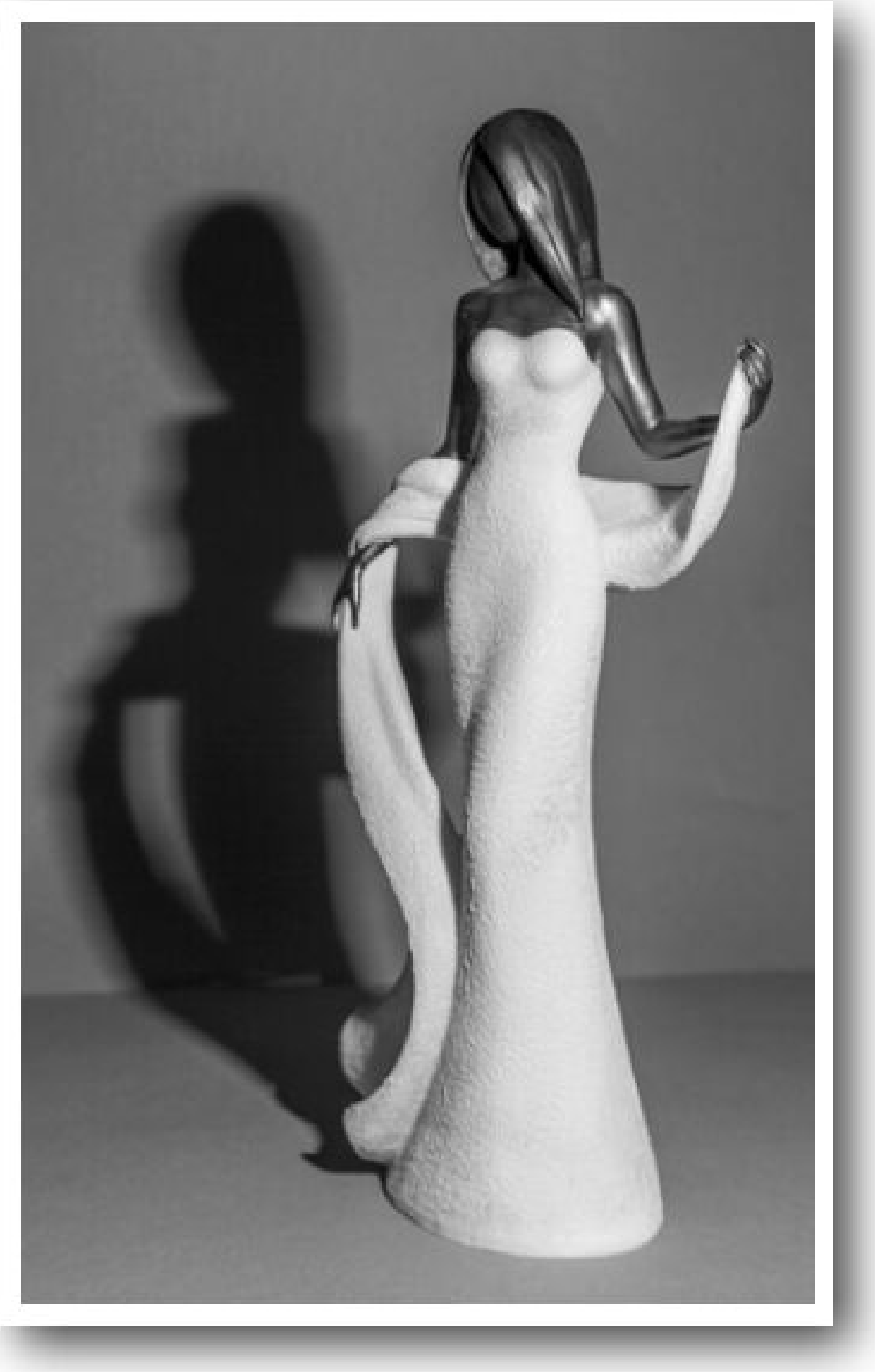
> "The ability to control your own lighting is key to adding an extra level of creativity that shooting with ambient light alone can't offer."

Types of light modifiers

1

Unmodified flash

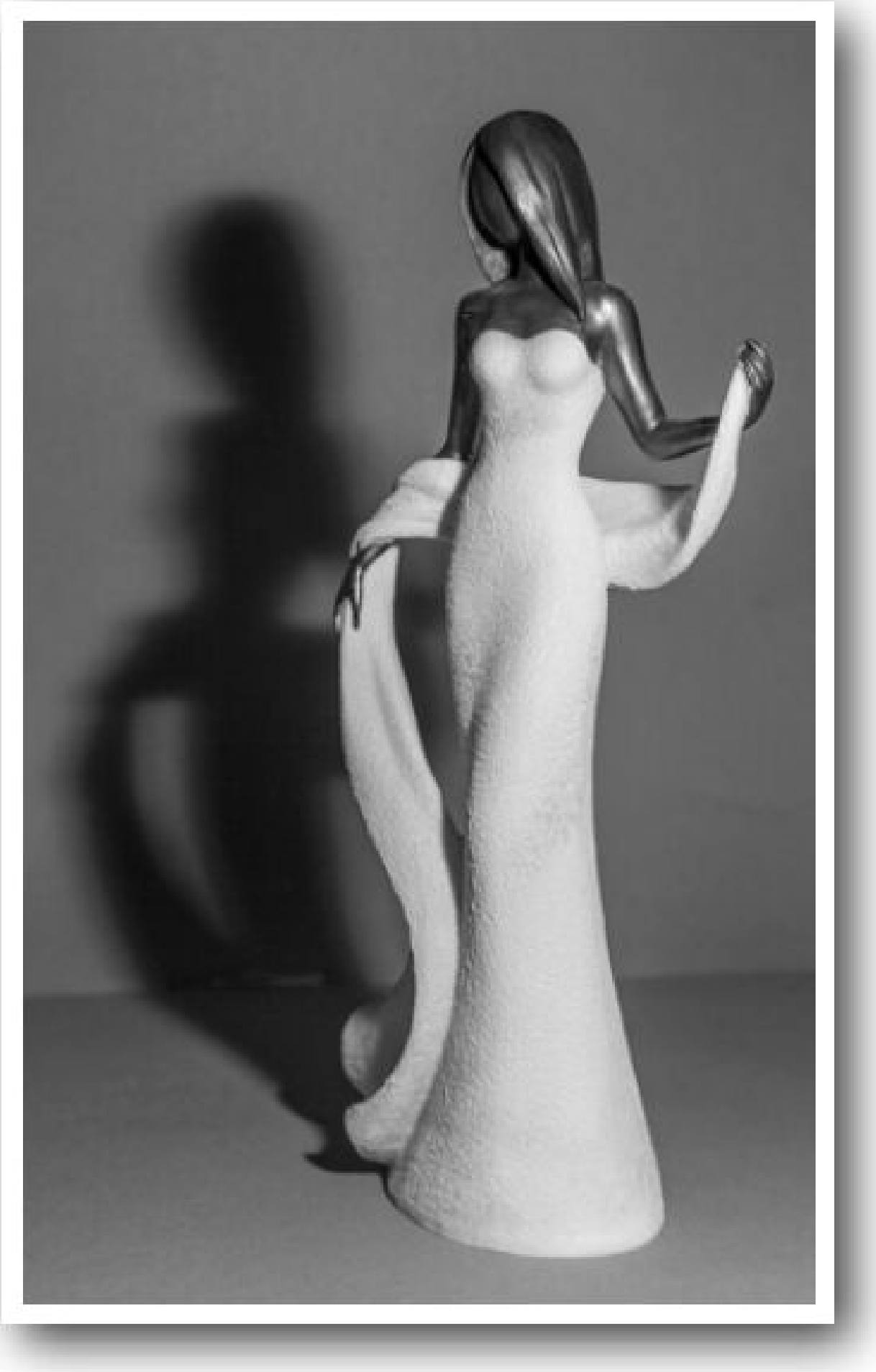
This is our default with which to compare the other types of light modifiers. Shadows falling on the subject are quite sharp and dark. The flash also creates a fairly well-defined and deep shadow behind the subject. Flash coverage can be altered to a certain degree by being able to 'zoom' the flash tube back and forth inside the flash head housing to match zoom settings on your lens.

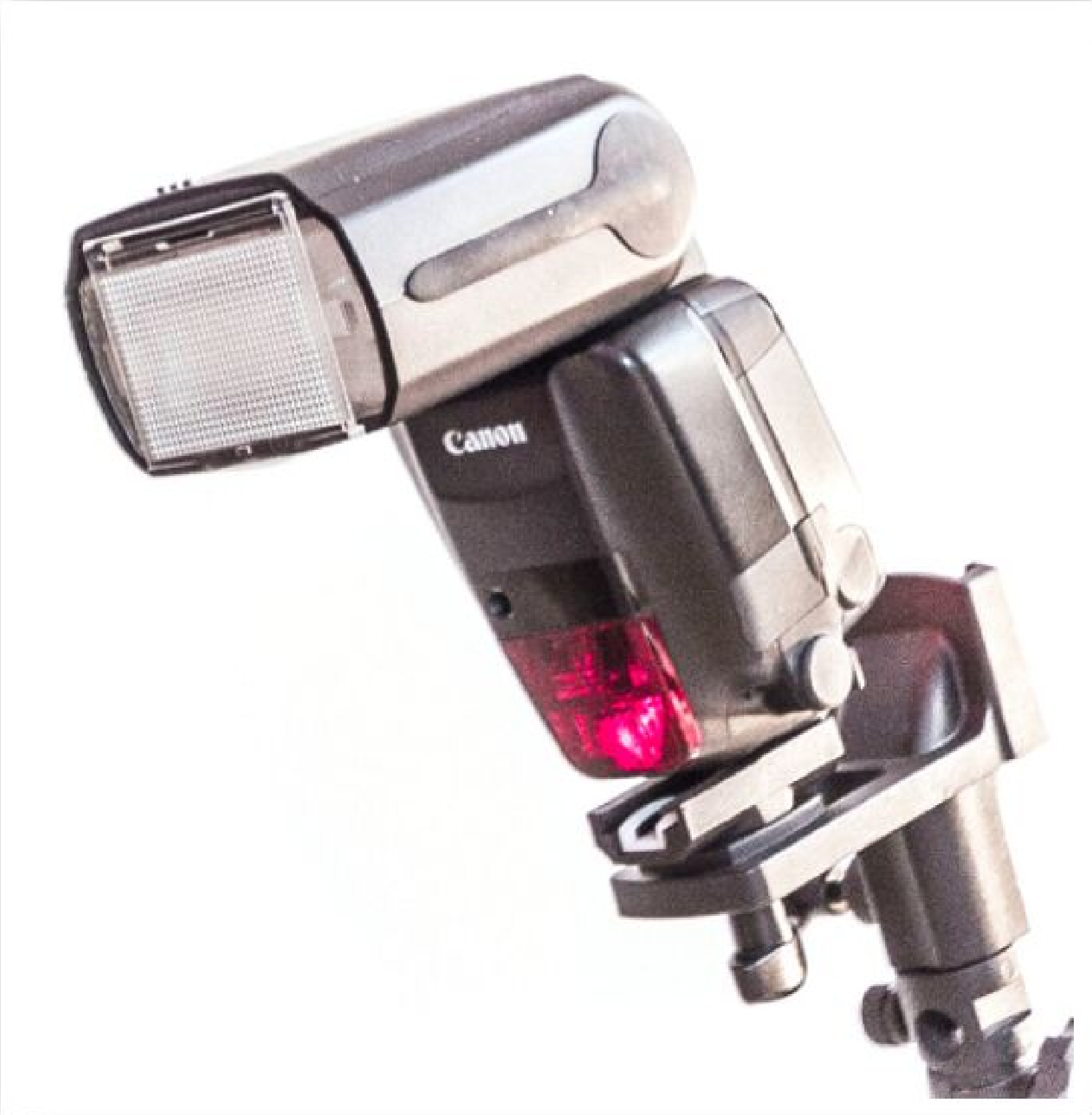


2

Flash with wide panel

The wide panel is a small built-in diffuser that can spread the flash output wider. Particularly useful if you are shooting a large group of people with a wide angle lens and need wider lighting coverage. Note that the shadows are largely the same as the unmodified flash with perhaps a slight softening of the transition from deep shadow to full illumination. Because the light is scattered wider, the darkest parts of the shadow are slightly brighter because of a small amount of light bouncing back into the scene. There is also a drop-off in intensity which would have to be compensated for.

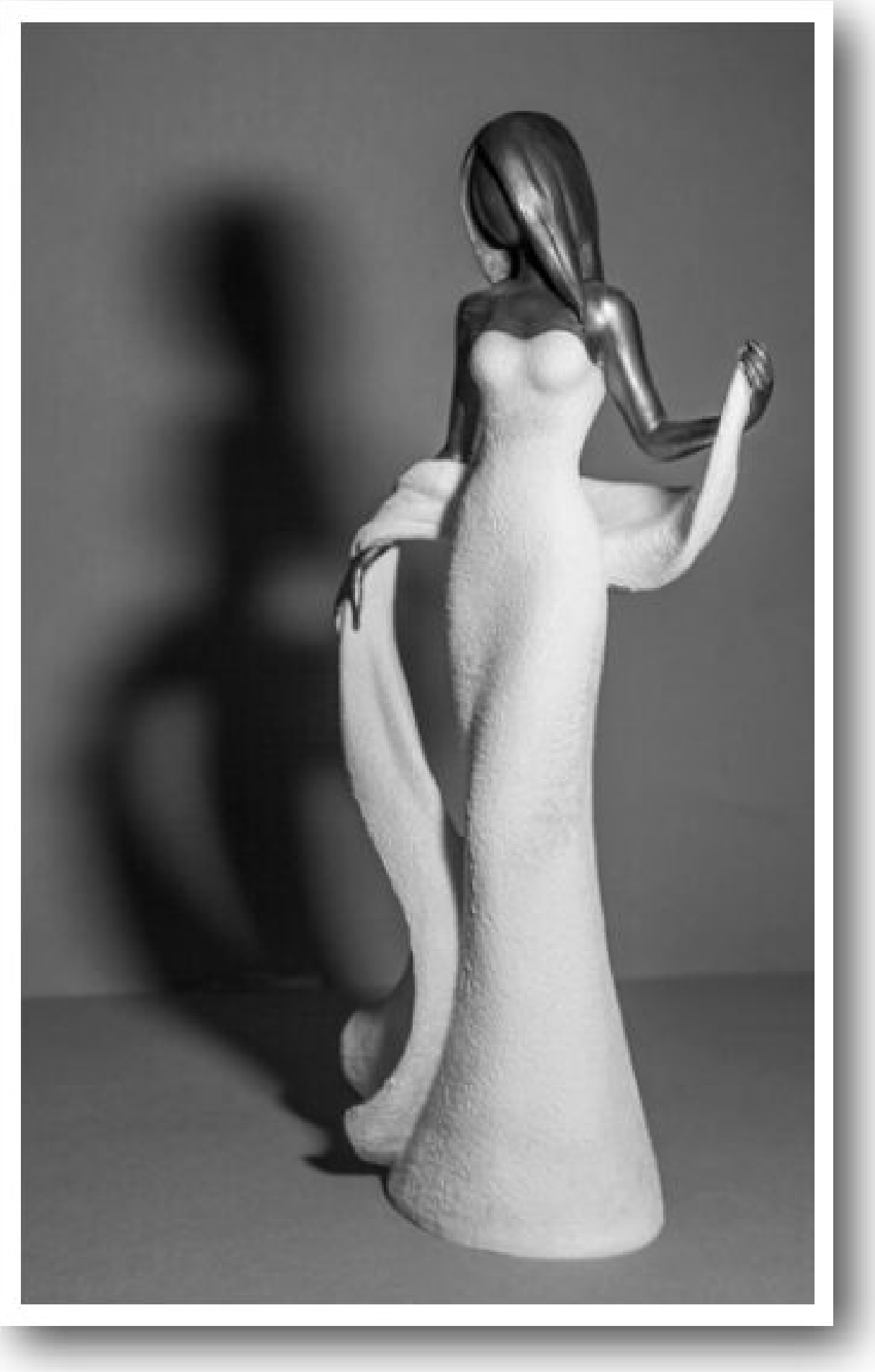


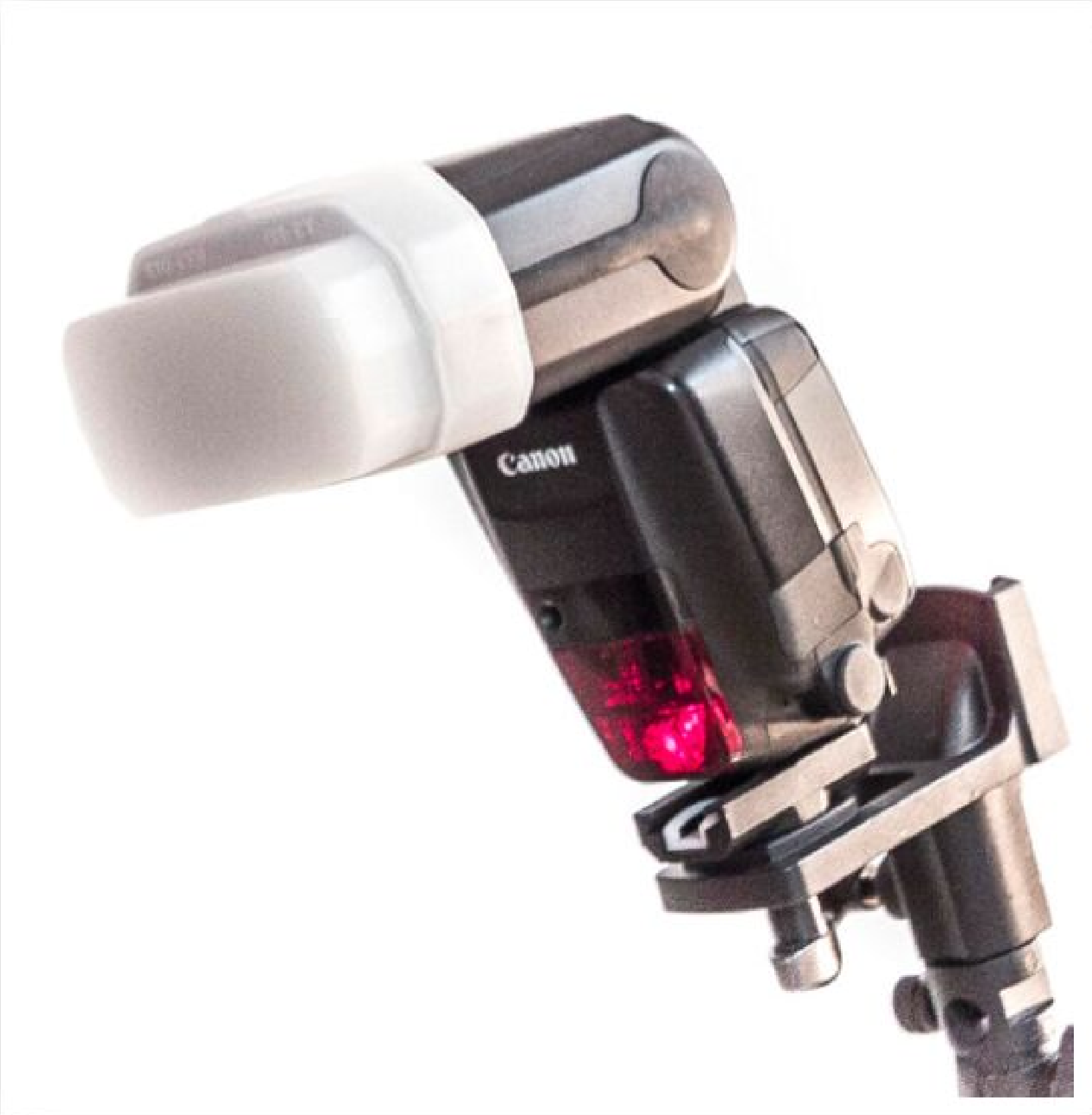


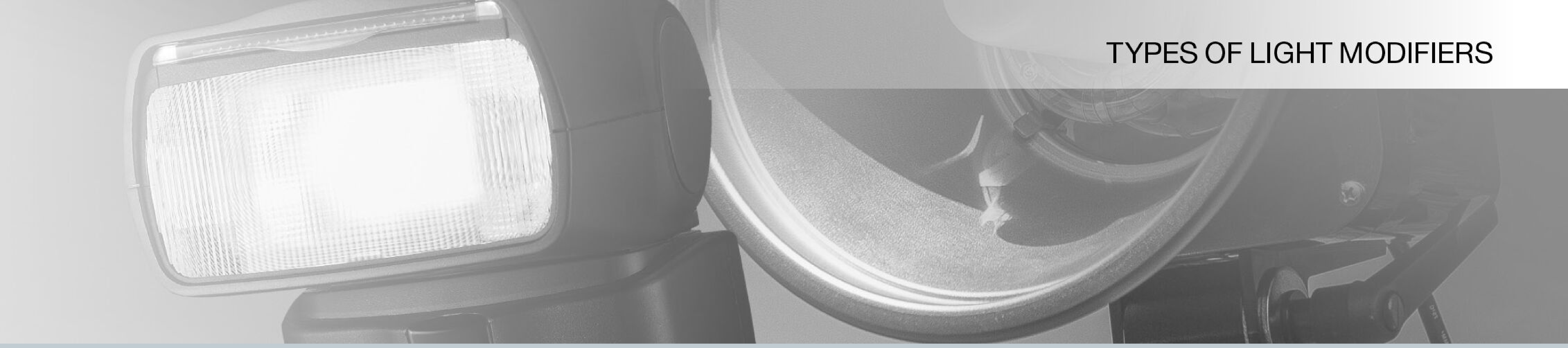
3

Omni-Bounce

In effect, this is a tiny softbox that covers the head of your flash. It enables light not only to emit forwards, but also around the sides. This gives a closer approximation of a bare bulb and allows for wider lighting coverage at the expense of reduced flash power because not all the light is thrown forward. Even from a relatively short distance, there is a visible difference in shadow softness. They are not quite as sharp, and the transition from shadow to full illumination is smoother compared to the previous examples.



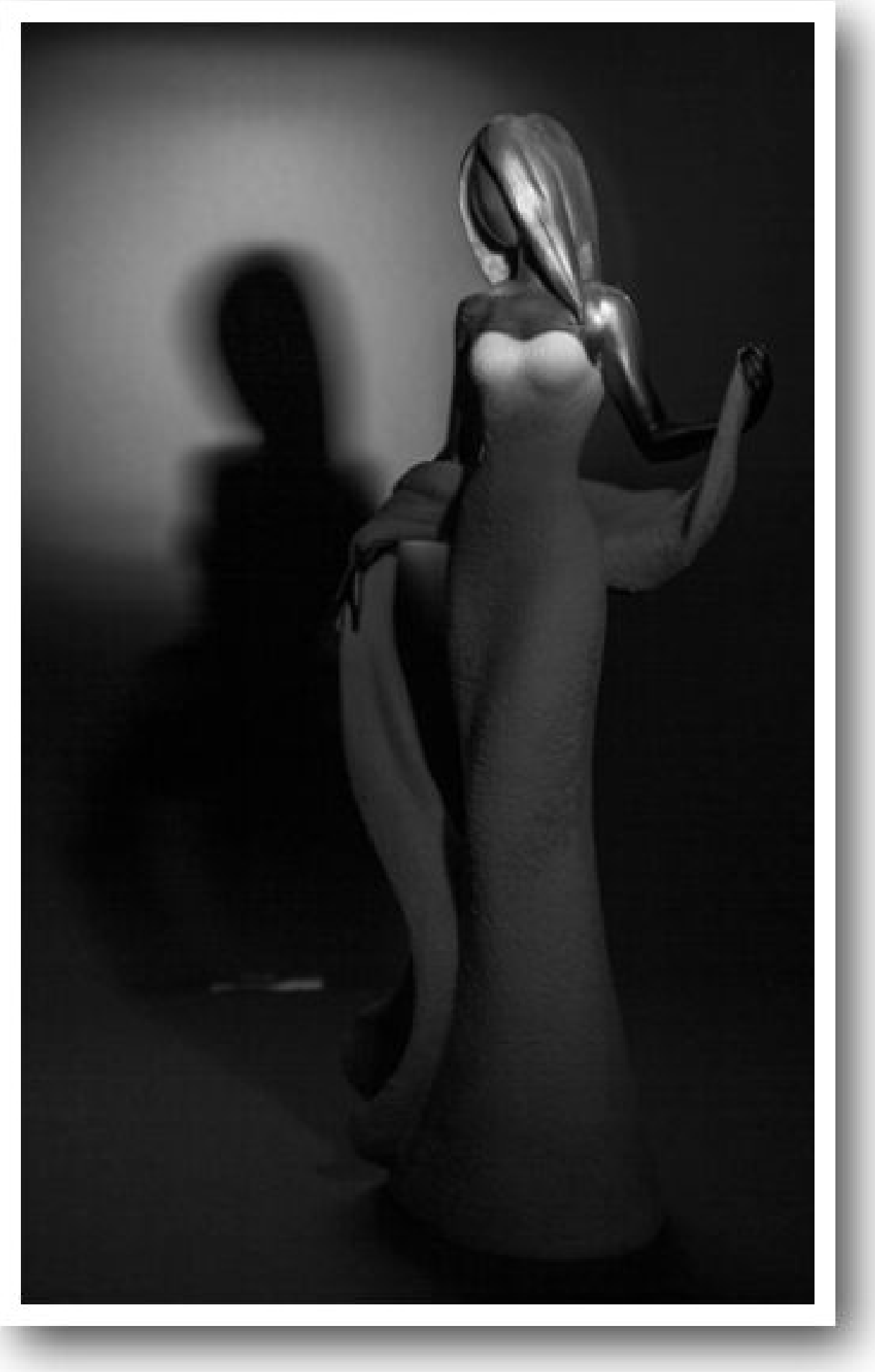


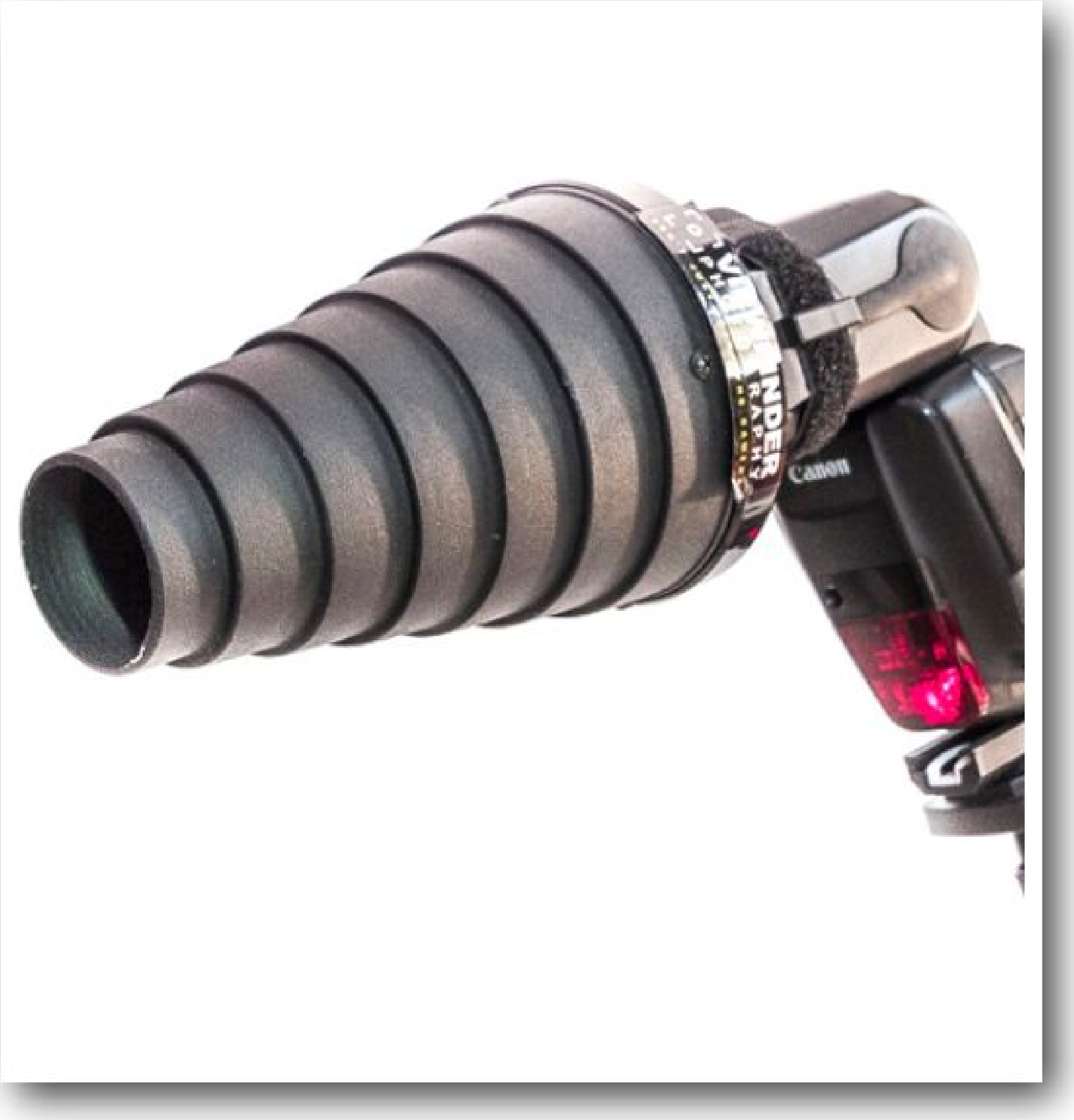


4

Snoot

A snoot is a tube that concentrates the light output of your flash. It gives the resulting beam a searchlight quality that creates a tight pool of light, ideal for highlighting a small part of your scene. Moving the flash further away will enable you to define a larger spotlight. Because the beam of light is so narrow, the rest of the scene is in relative darkness. Because the light is effectively reduced in size, the shadows it creates in our example are fairly sharp once again.

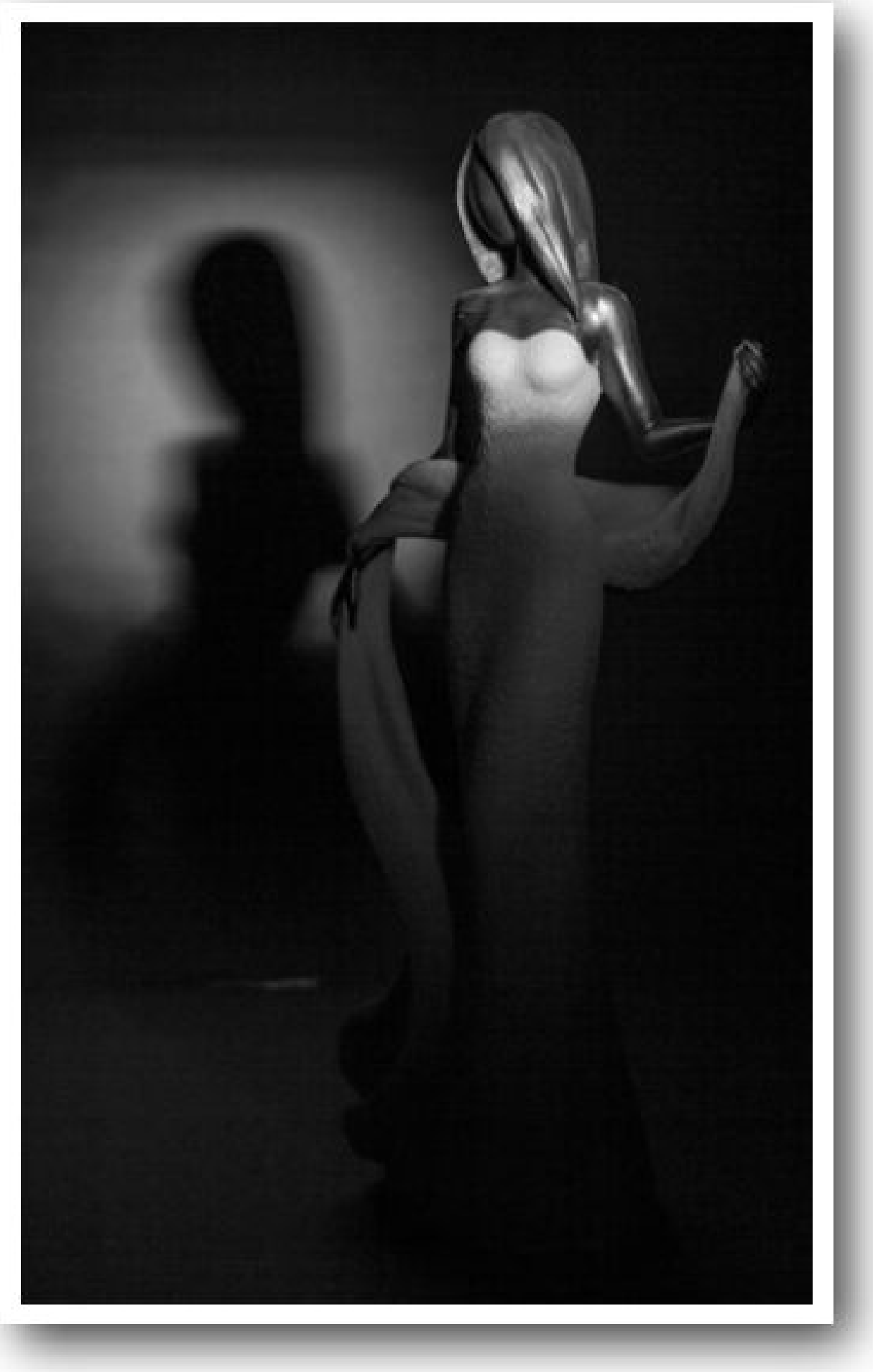


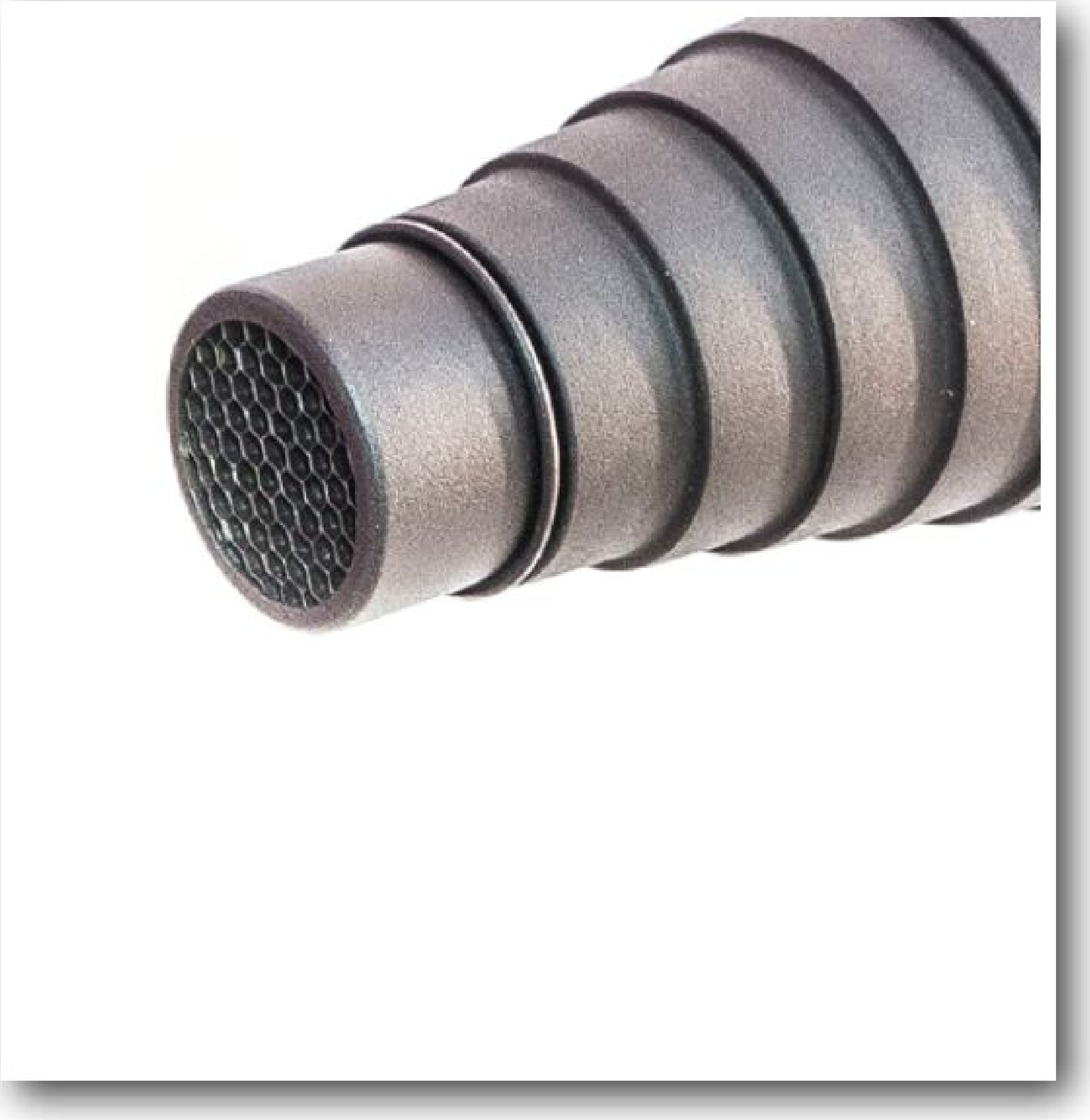


5

Snoot with honeycomb disc

The honeycomb disc, when added to the end of a snoot, has two major effects. It reduces the illumination of the flash, and creates a much more directional light with less light spillage. The image is generally darker, the spotlight is tighter, but shadows are broadly the same as the snoot image before the disc was added.

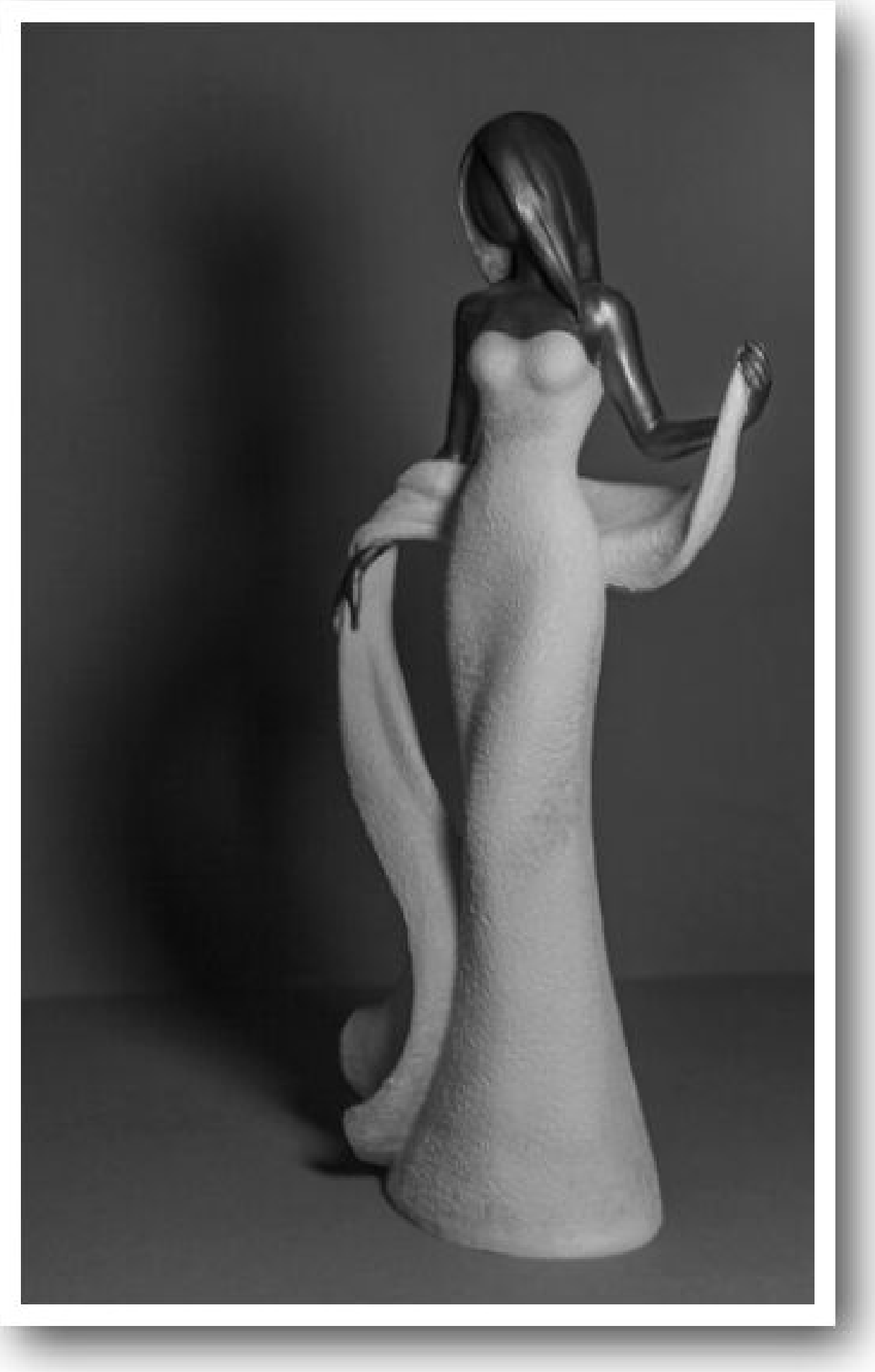


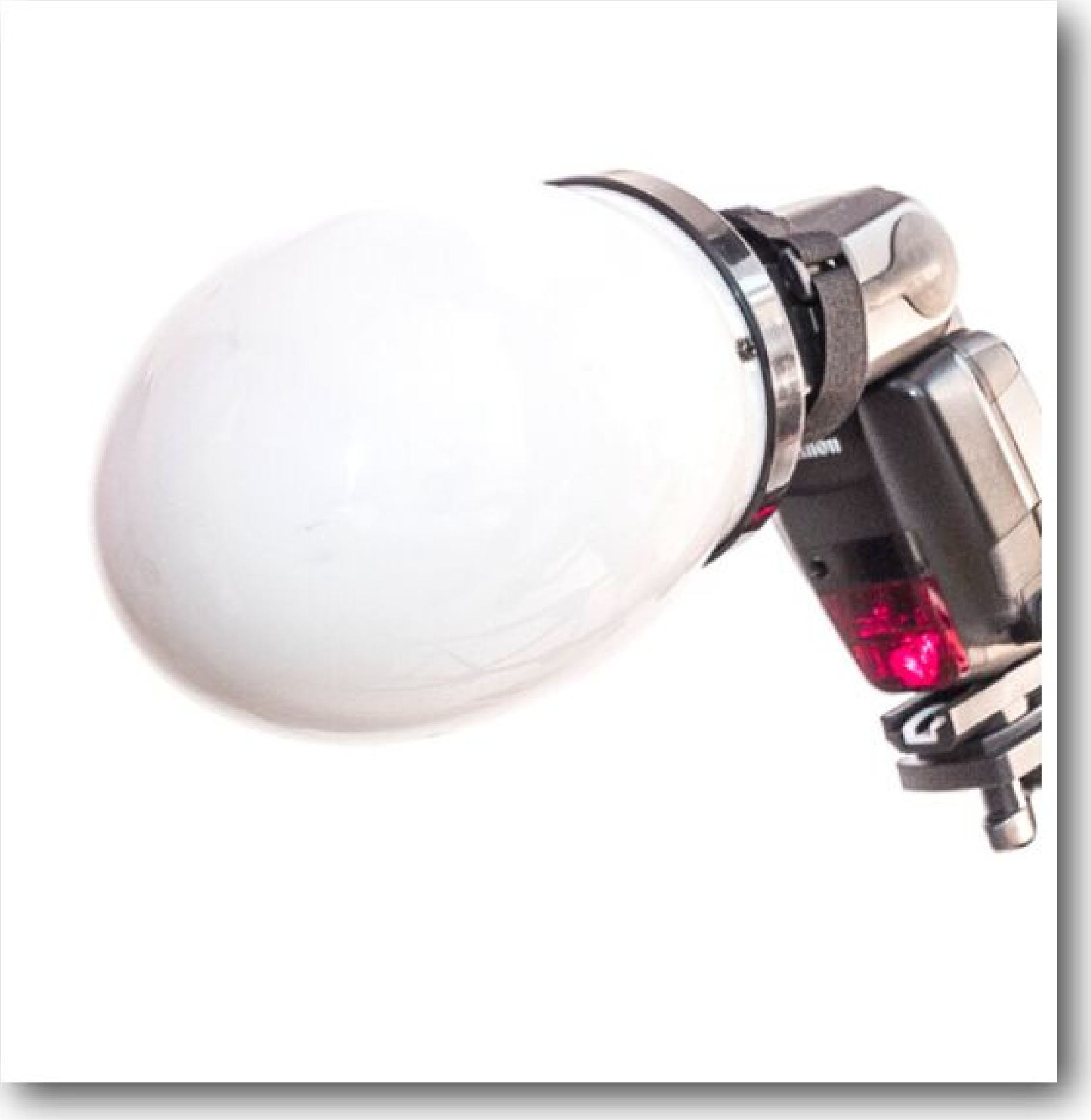


6

Dome diffuser

The dome diffuser takes the idea of the omni-bounce and expands upon it. The larger physical size of the dome allows you to use it like a true, large, bare bulb. With it, you can illuminate larger areas with a more even light source. Bear in mind that, like the omni-bounce, light is spread in all directions so your subject illumination will appear diminished. That said, our example with the dome shows a marked improvement in shadow softness, both on the subject and the shadow she is casting.



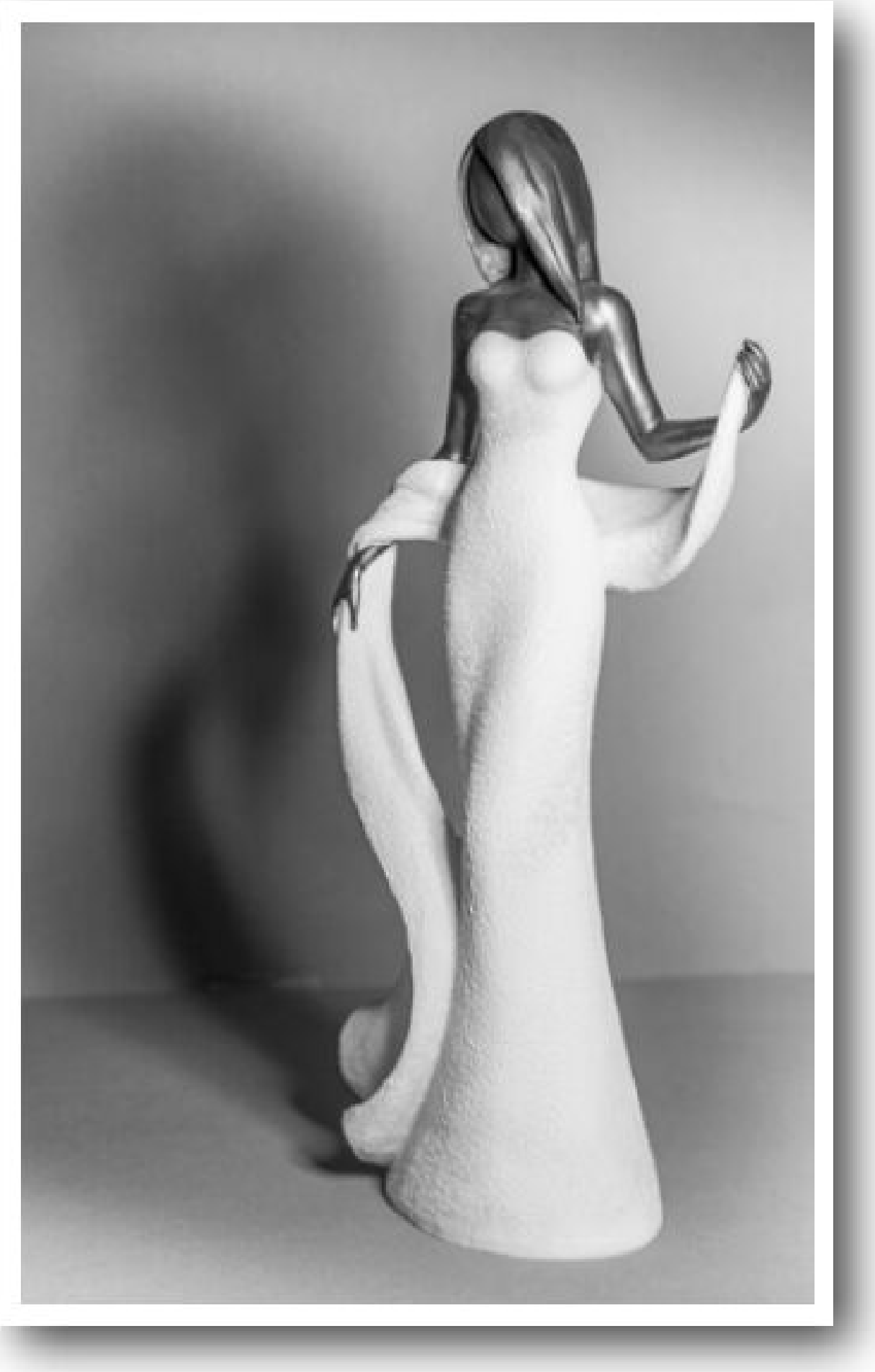


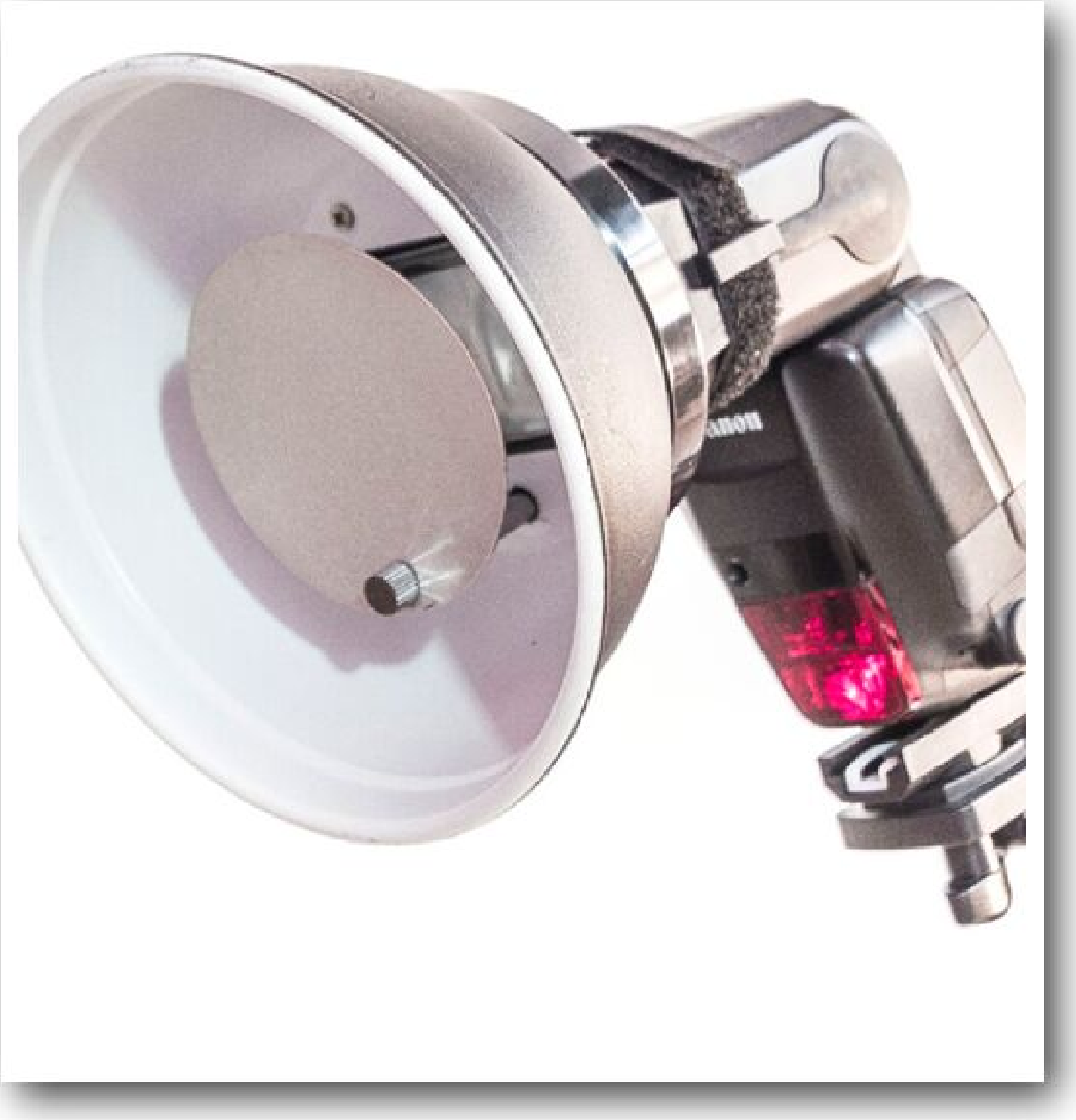
Types of light modifiers

7

Mini beauty dish

The mini beauty dish is comprised of two main elements. The dish itself, which can be white or silver, and the small deflector dish which sits inside the dish and bounces the light from the flash onto the side surface of the dish, which then throws the light forward. It creates a larger apparent light source which helps to create slightly softer shadows. Beauty dishes, as the name might suggest, are used very often in fashion shoots, albeit much larger versions than the one used here. Shadows can be softened quite well, once again at the expense of reduced flash power.

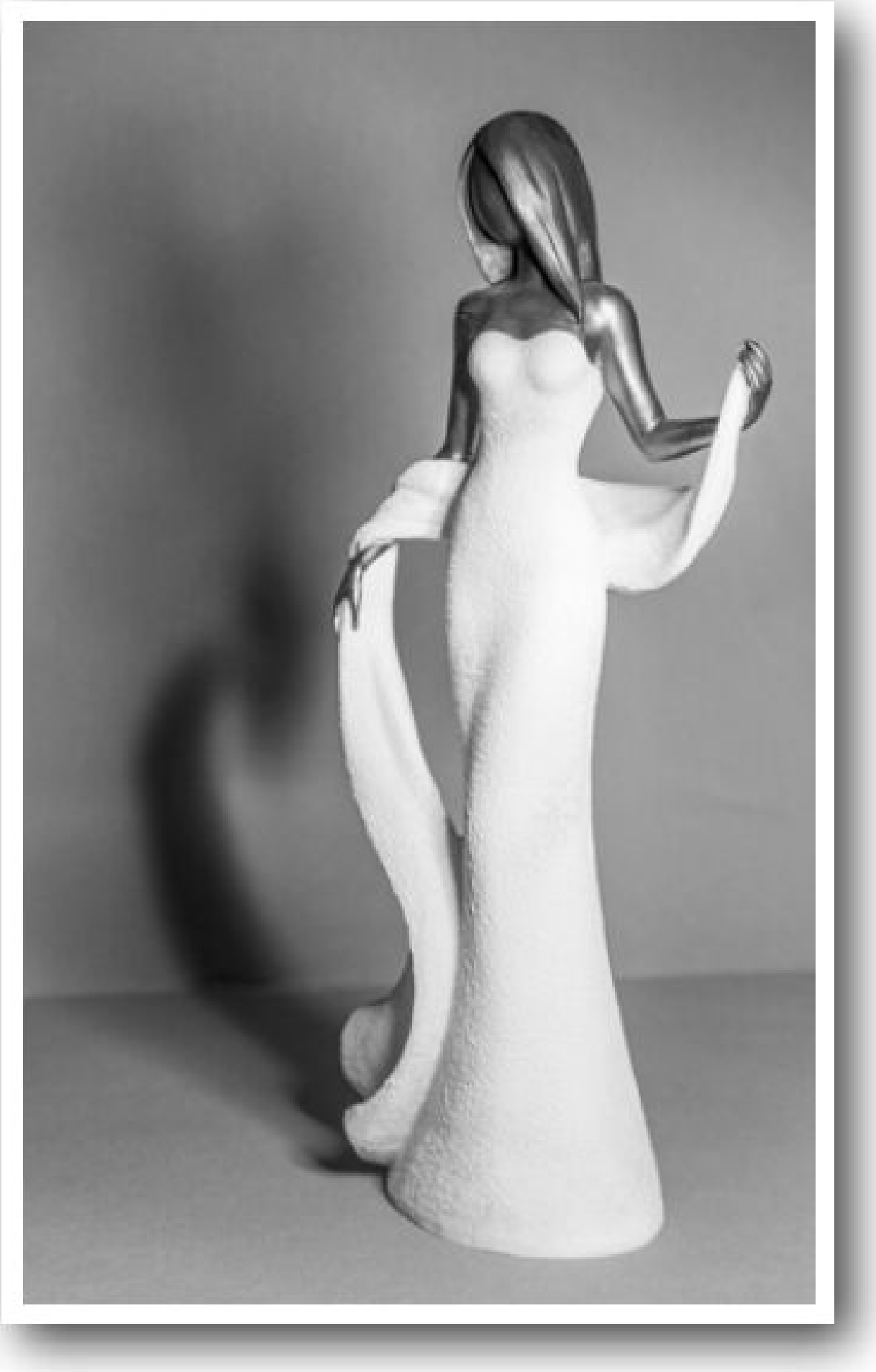


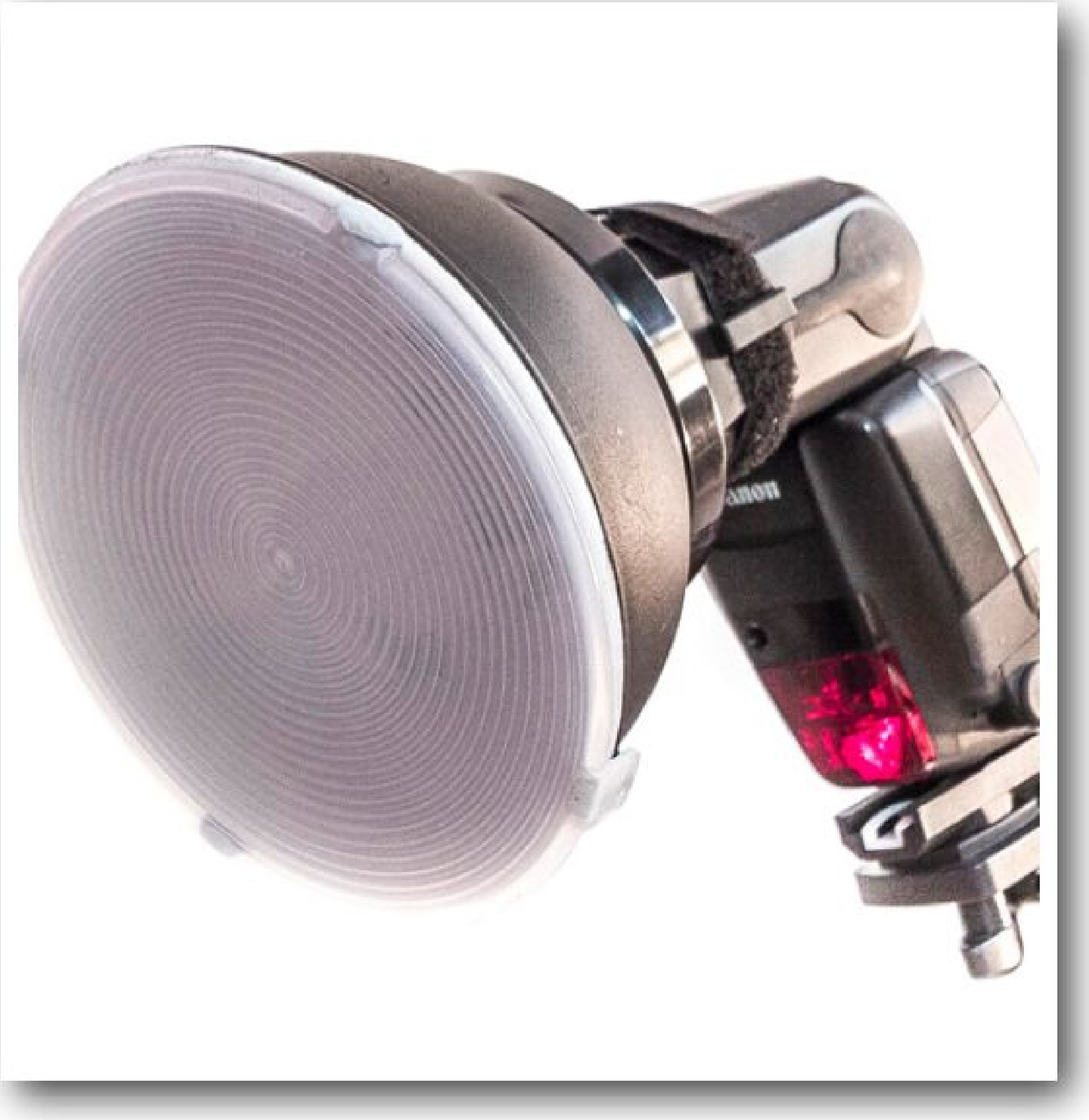


8

Mini beauty dish with front diffuser

This has the same setup as the previous configuration, with the addition of a translucent diffuser disc that covers the front of the dish. It is used to diffuse light even more so it is less directional. You will lose additional flash power because of the wider scattering of light, and will have to adjust flash and camera settings accordingly. On full-sized beauty dishes, the translucent covering is referred to as a 'sock'. Compared to the previous setup, the shadow areas of the test shot are less defined.

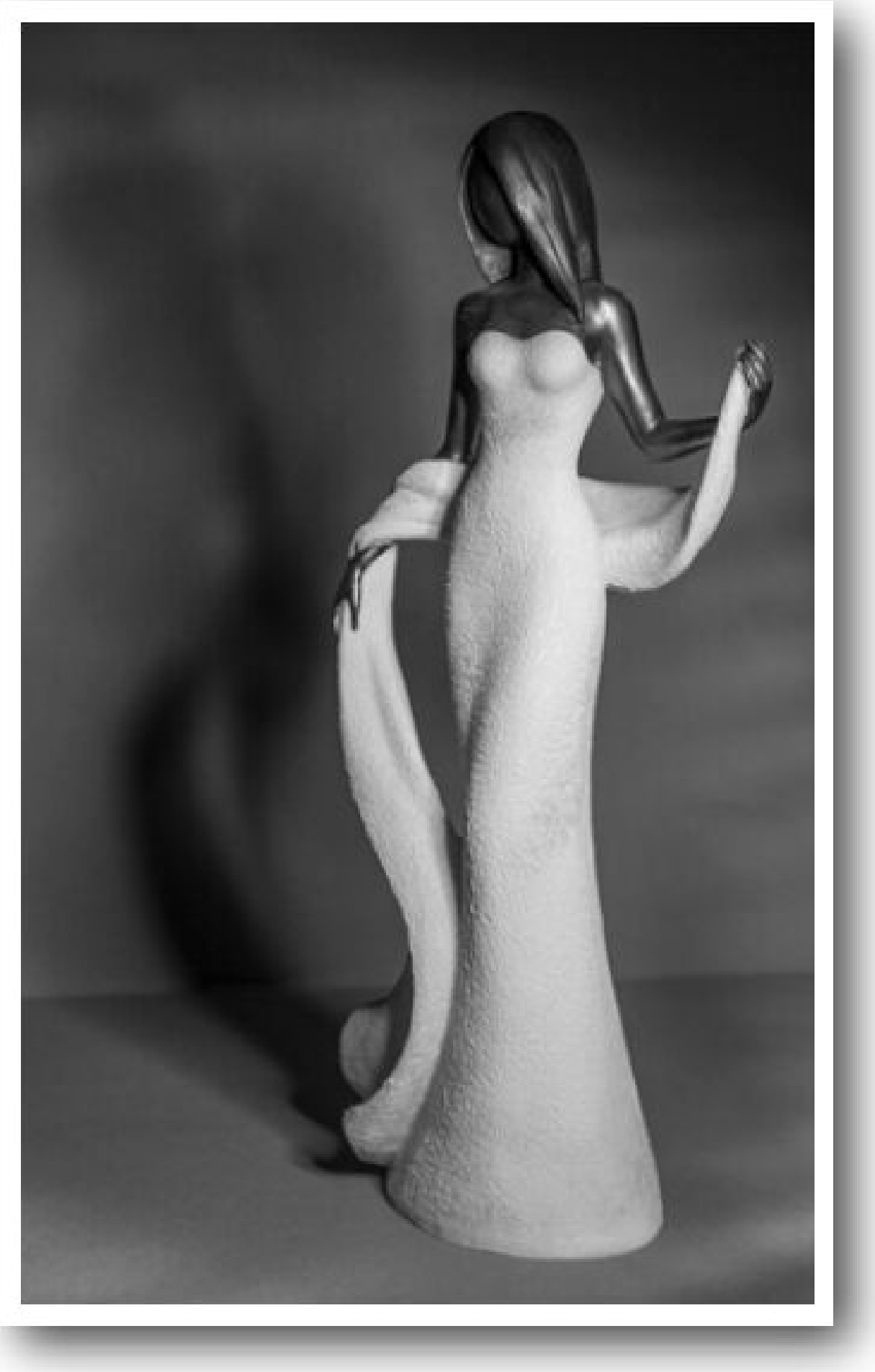


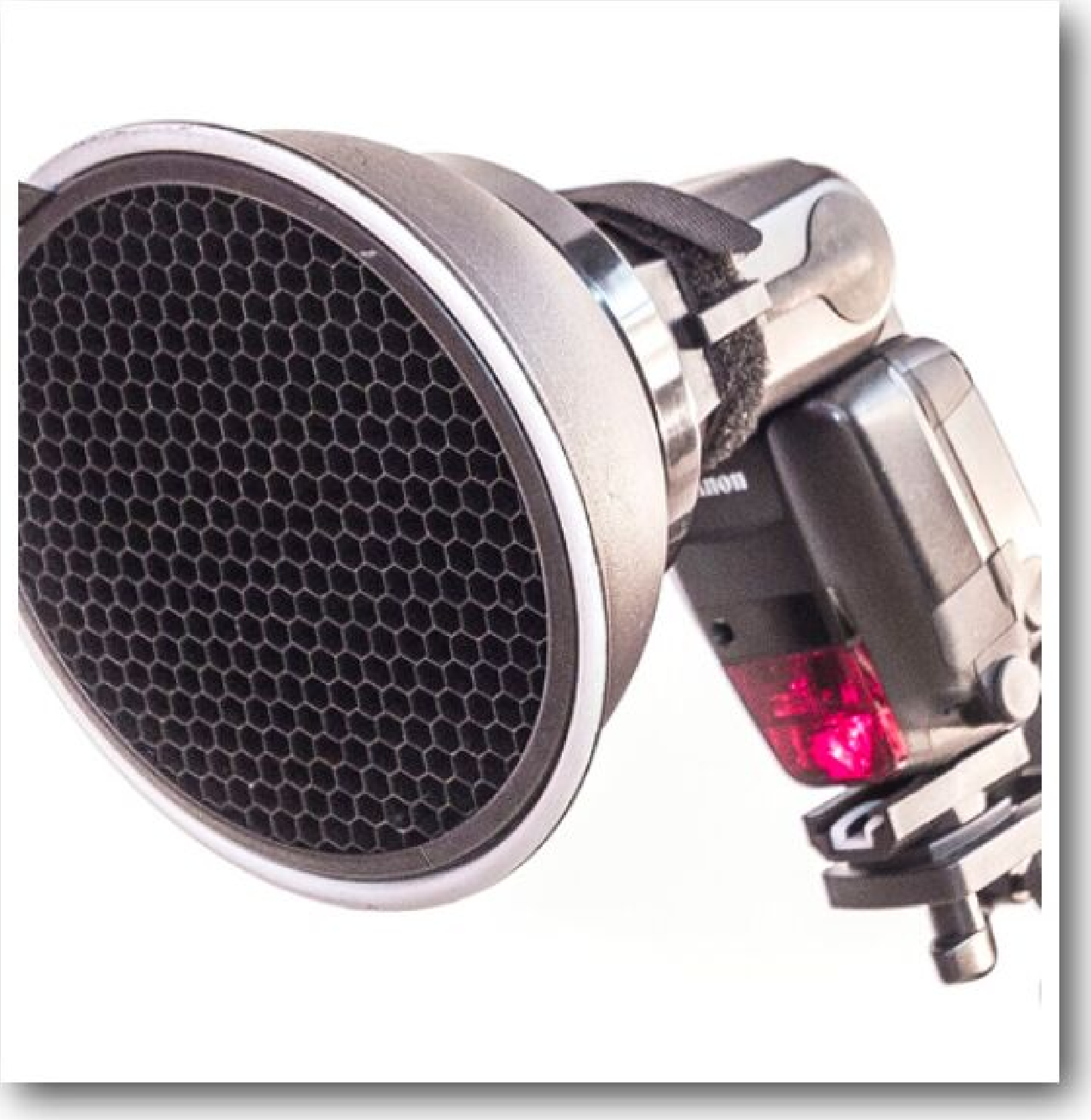


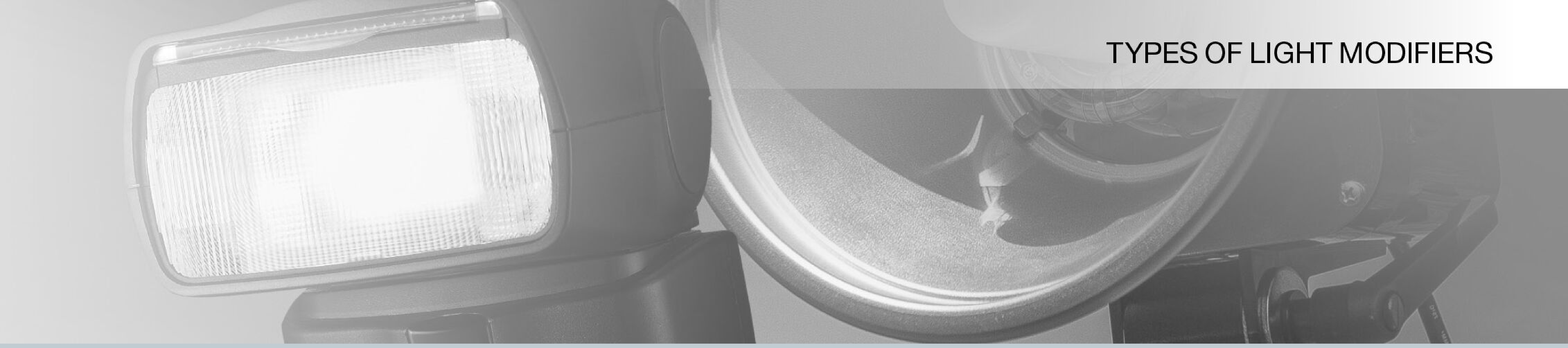
9

Mini beauty dish with honeycomb disc

If you want more directional light from your beauty dish, you can always add a honeycomb disc. Honeycomb discs are just add-on panels that have a mesh of hexagonal holes. This arrangement acts to shape the light and can reduce or even eliminate light spill. It transforms the light emanating from the dish into a much tighter beam. Much less light will spill out and be lost; and as mentioned before, it will create a spotlight effect and also greatly reduce the brightness emitted by the flash.



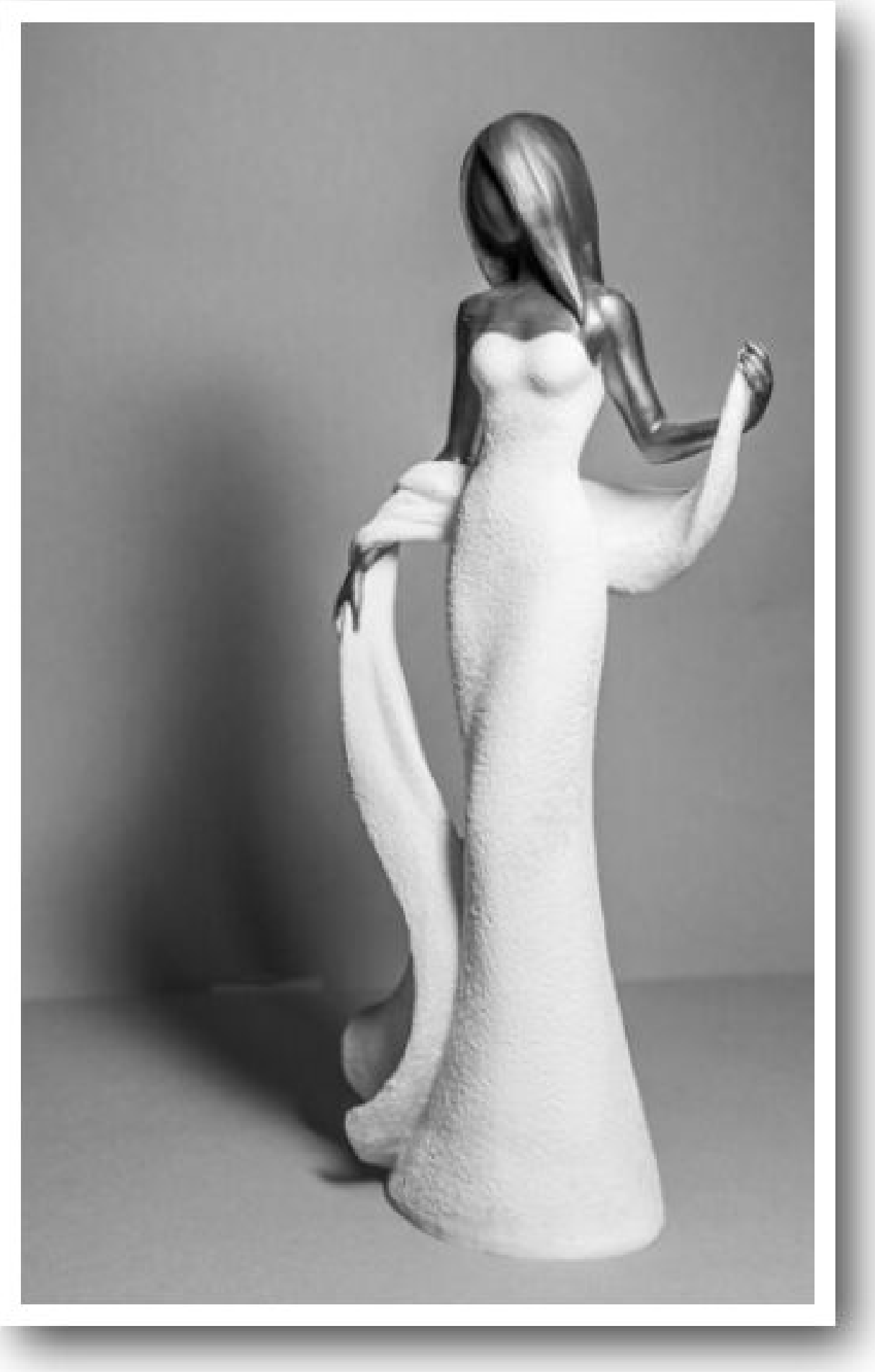


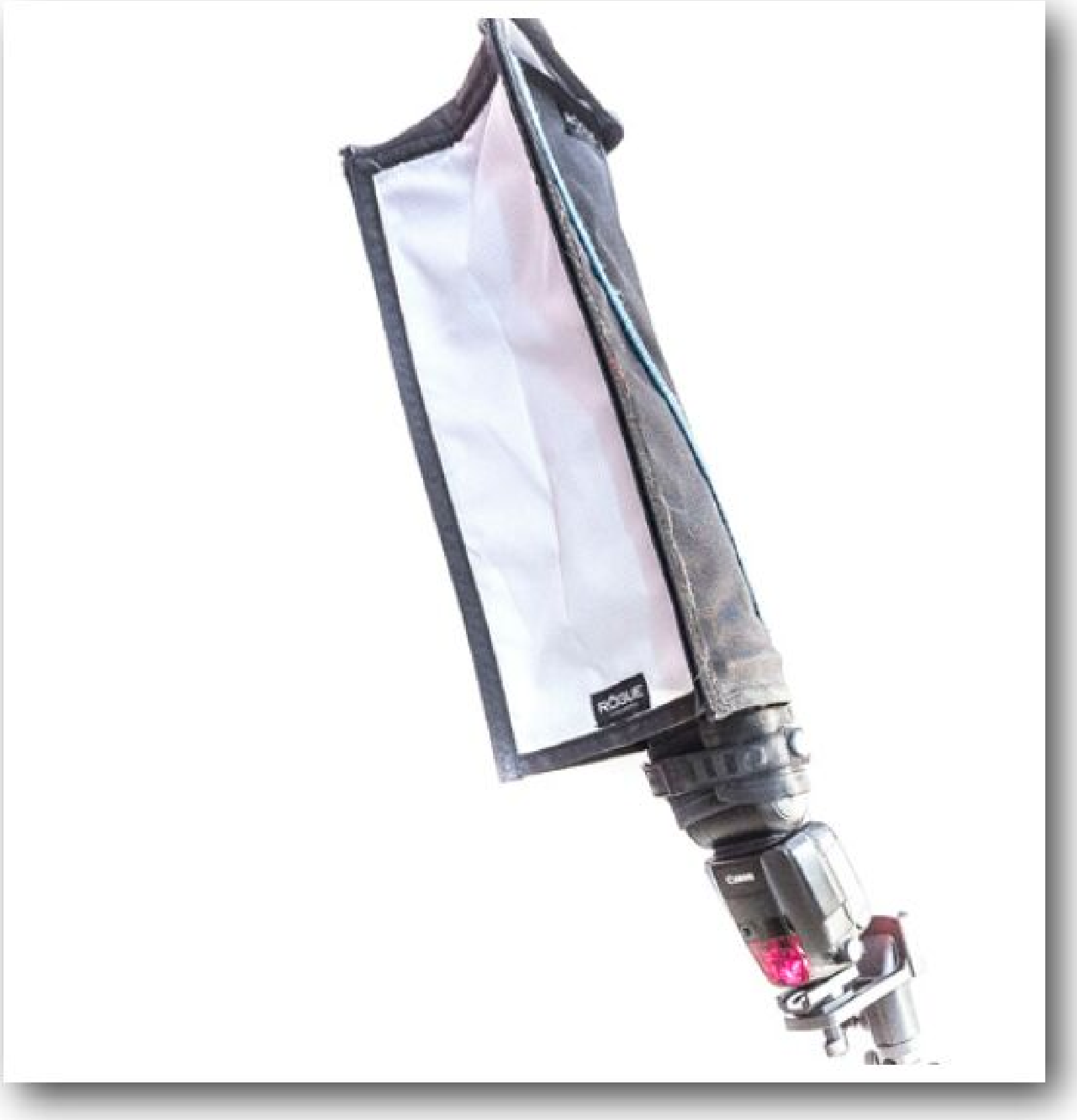


10

Mini strip box

Strip boxes are essentially thin soft boxes that allow you to have soft diffused light, but also keep it quite directional with minimal spill. The flash-mounted version shown here is a strong, flexible, vinyl panel that is silver coated on one side with a translucent panel that creates a sleeve into which the flash is secured. When the flash fires inside the sleeve, light bounces around inside, and because of the silver coating is reflected outwards through the translucent material. As the strip box is something in the order of five times the surface area of the flash head, the resulting shadows are the softest yet.

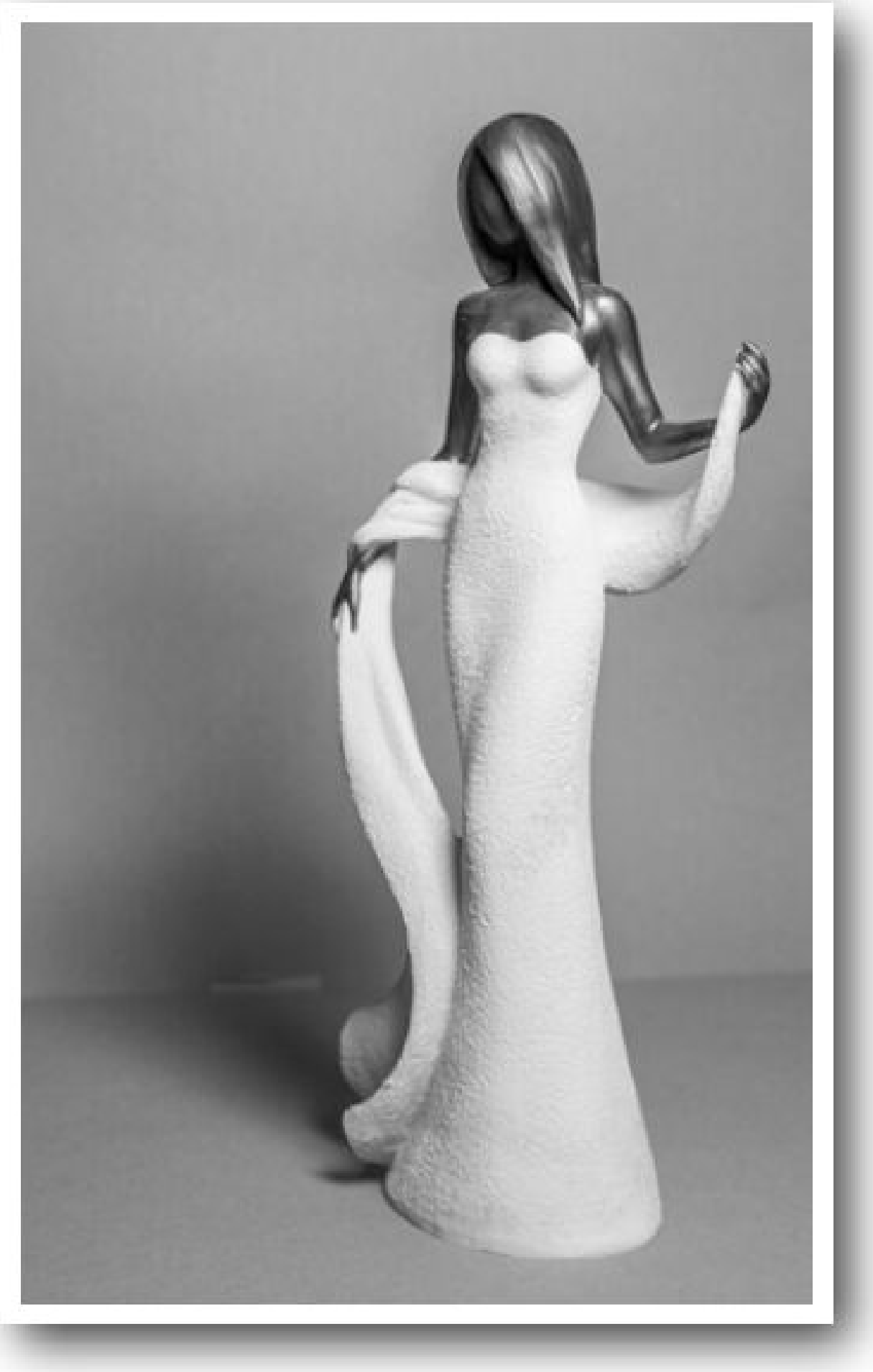


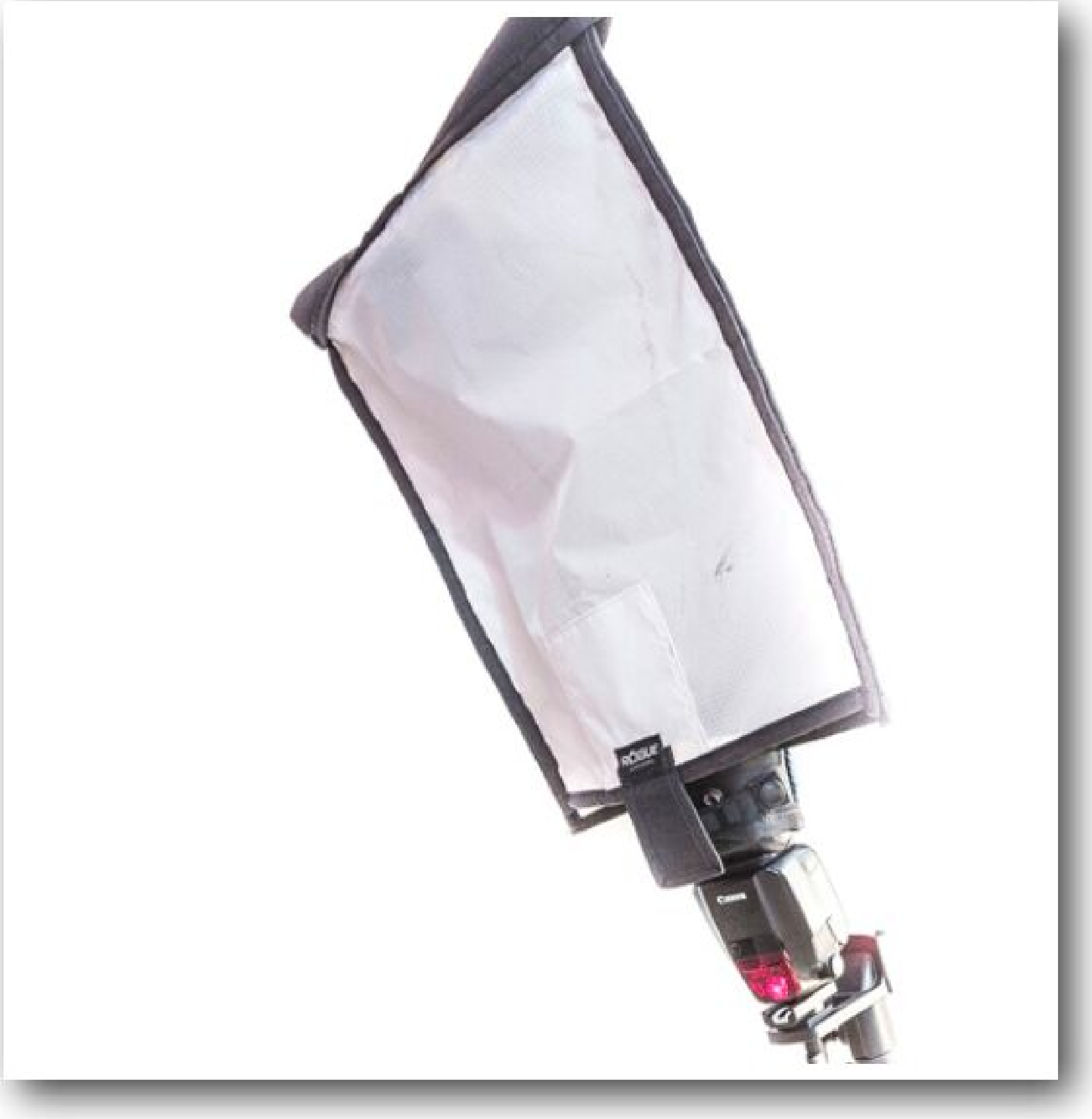


11

Diffusion panel

The diffusion panel takes the idea of the strip box and gives you yet more surface area to use as your light source. It is made from the same materials with a larger square translucent panel with the same flexible silver backing inside the sleeve. It is held together with Velcro and is strapped over the flash head which fires into the sleeve just like the strip box. Of all the small modifiers we've used, because this one is the largest, it gives us the most diffused results with very soft shadows.

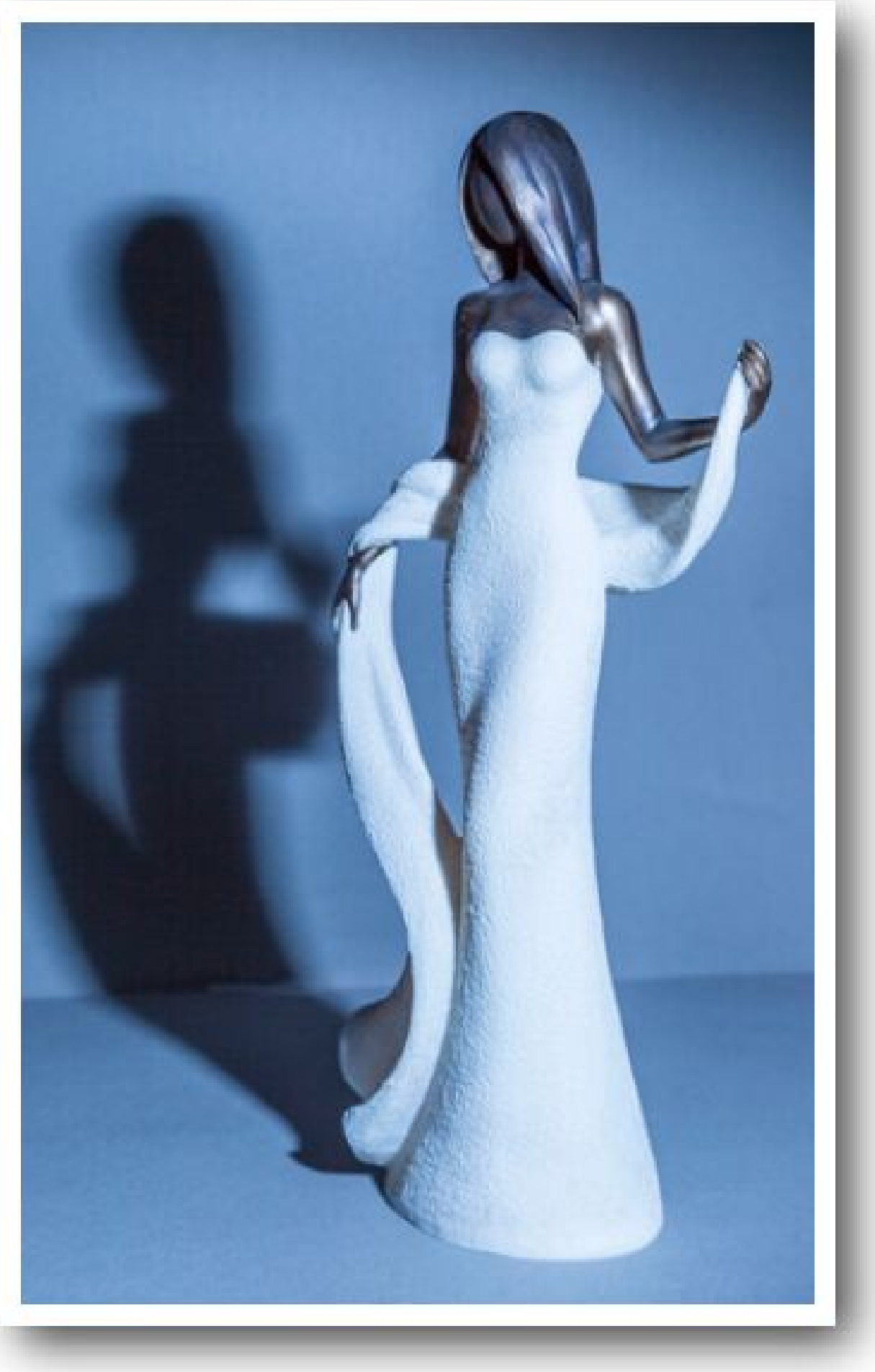


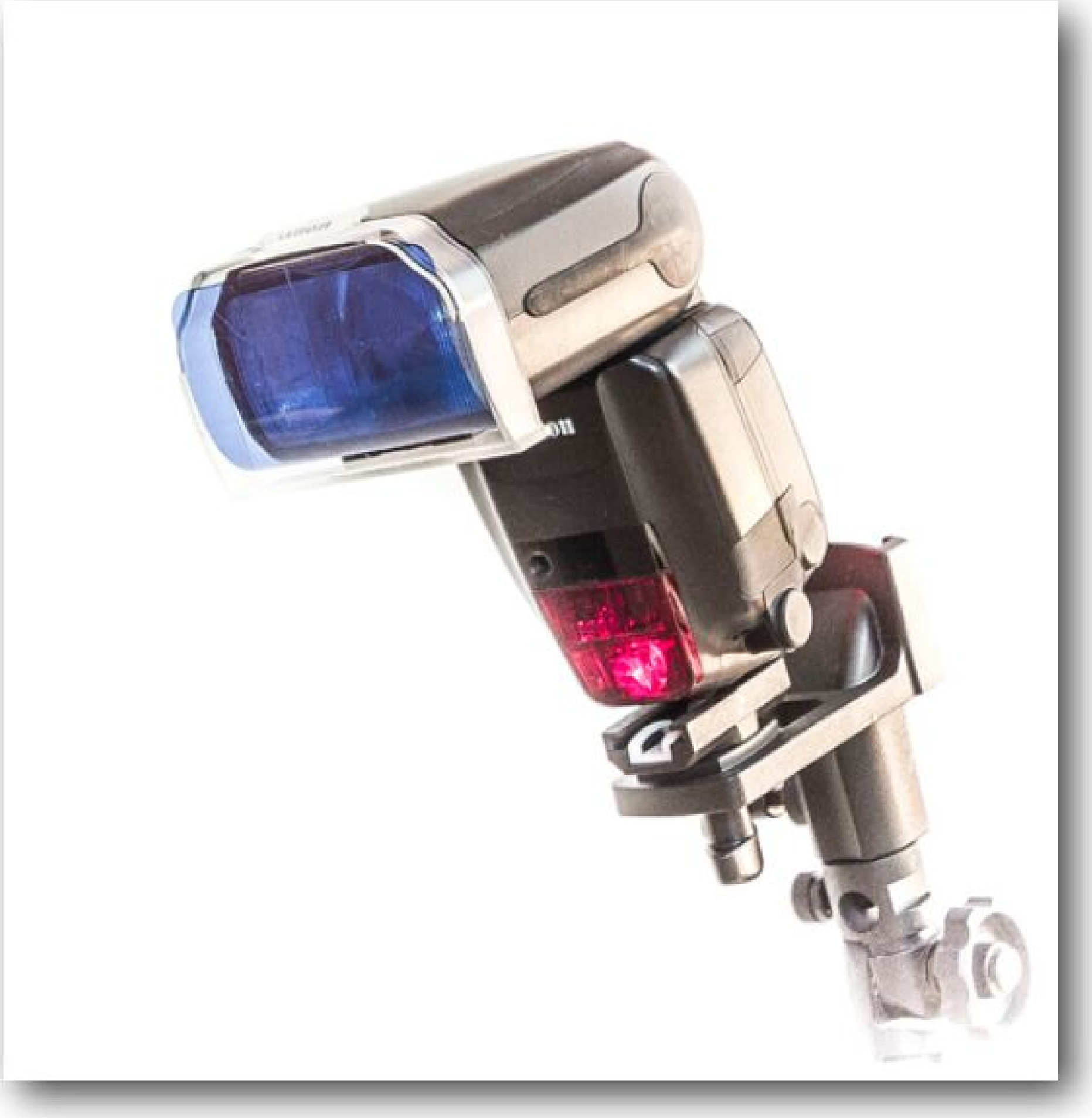


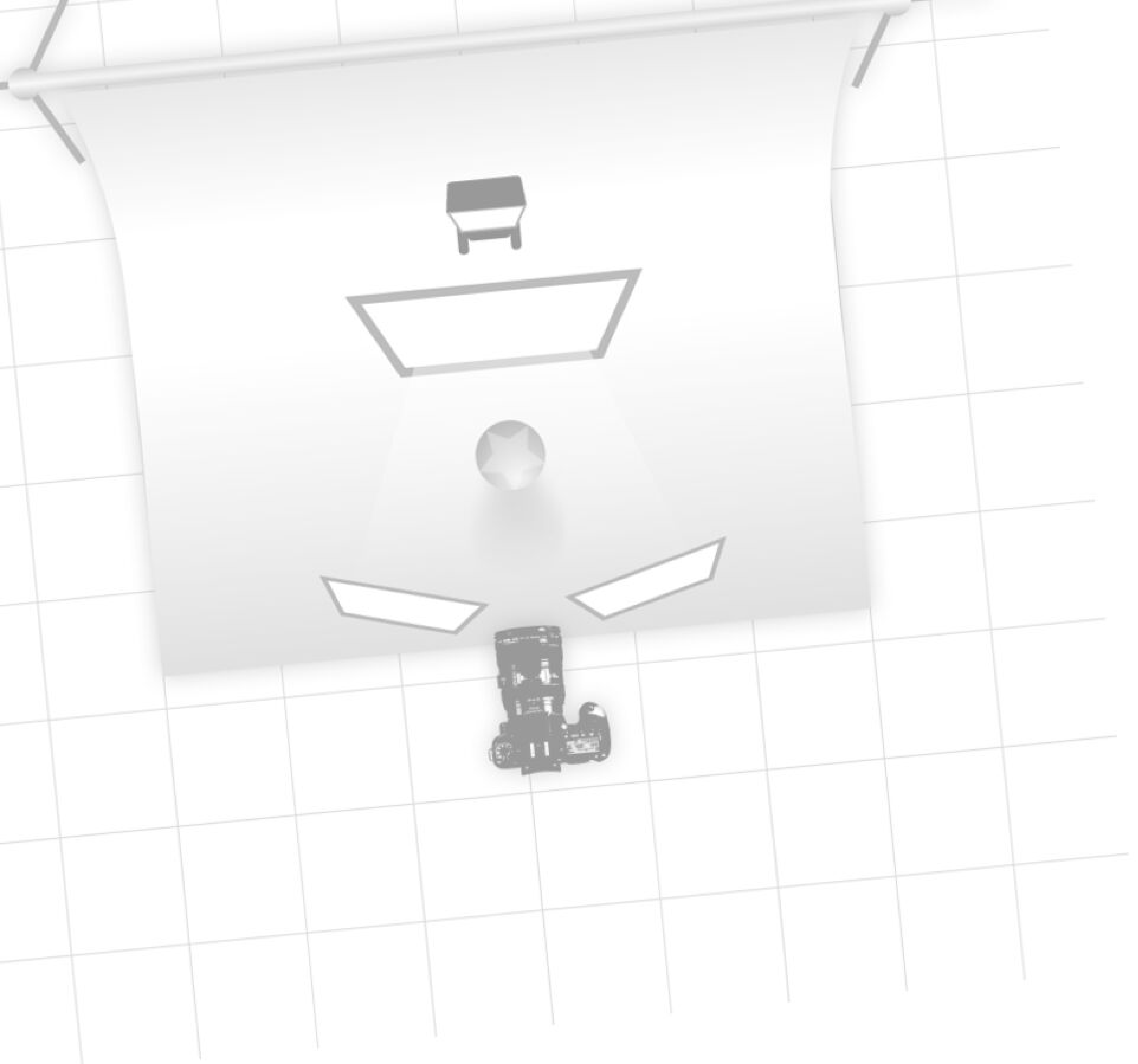
12

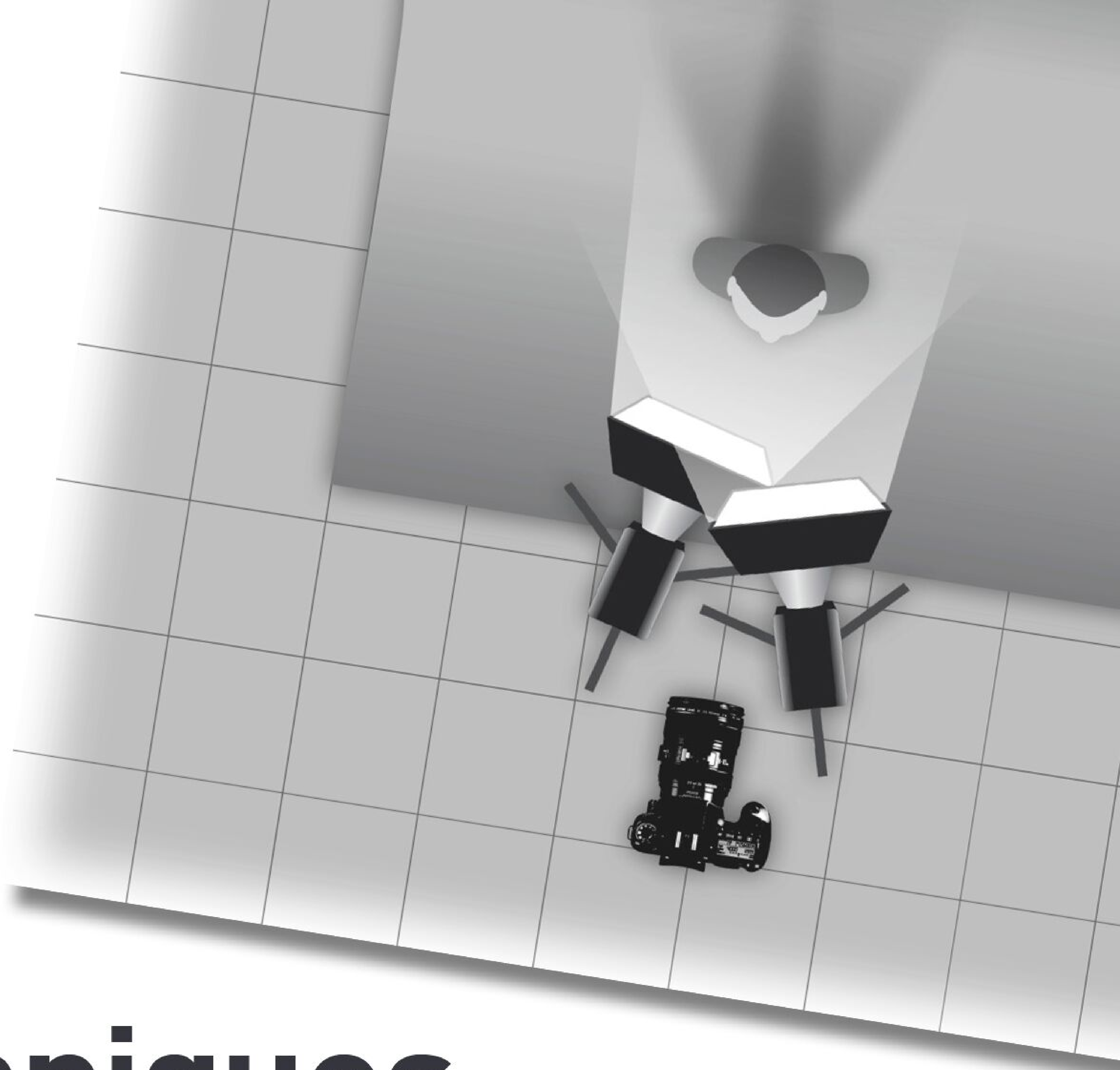
Gel holder

There may be occasions when the daylight-balanced light created by your flash doesn't suit your needs. You can purchase special holders that clip onto the front of your flash. Into these holders you can place coloured gels that transform the shade of your light. You can also use the gels on their own, taped to the front of your flash, and add any of the modifiers shown here to get not only the softening and diffusing effect they provide, but the coloured light you might also need for that shot.









Lighting techniques and diagrams

SHEDDING SOME LIGHT ON SETTING UP LIGHTING FOR PORTRAITS

Over the course of time, as photography and photographic equipment developed, the medium moved from only shooting with available light over the course of extremely long exposure times, to the use of additional light sources such as constant artificial light and flashes.

Now that photographers were employing flash in their setups, it became apparent over time, that there were several basic lighting configurations that gave excellent and repeatable results when it came to lighting a portrait or any kind of scene. It was common to note down these configurations and create lighting diagrams that the photographer could refer back to if they wanted to use that particular setup again. As time went on, it was clear that were a few setups that were favoured above all others when it came the possible arrangement of lighting, camera, subject, and the control of light and shadow in the shot.

As you develop as a photographer, always consider making a note of the setups you use that give you pleasing results. As well as the arrangement of your lights, note your flash power settings and the camera settings you used too. You never know when you'll need that setup again, and if you do, you'll quickly be able to get yourself dialed in and shooting all the quicker because you have the 'recipe' on hand to refer to. These days, the days of scribbling in a notebook with your settings is becoming a thing of the past. Now you can create lighting diagrams on your computer, or download ready-made lighting diagrams of all the most popular setups, as well as those created for very specific shooting requirements. They are a great resource for fledgling 'strobists' who want some guidance when it comes to setting lights in your shoot.

Over the next couple of pages, we list out some of the most popular setups for lighting portraits to get you started with your photographic projects. ■

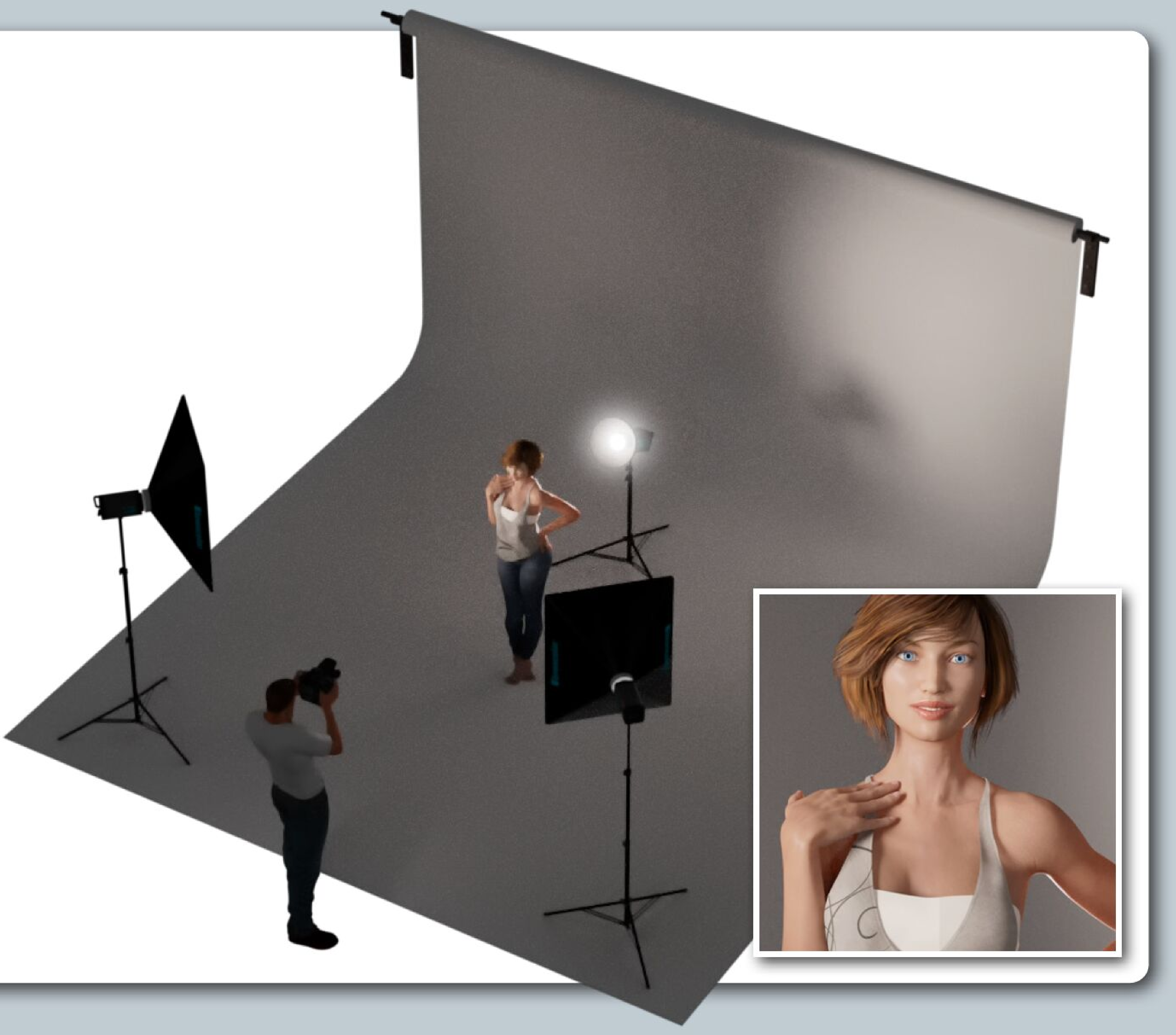
> "...there were several basic lighting configurations that gave excellent and repeatable results."

Lighting techniques and diagrams

1

Three-point lighting

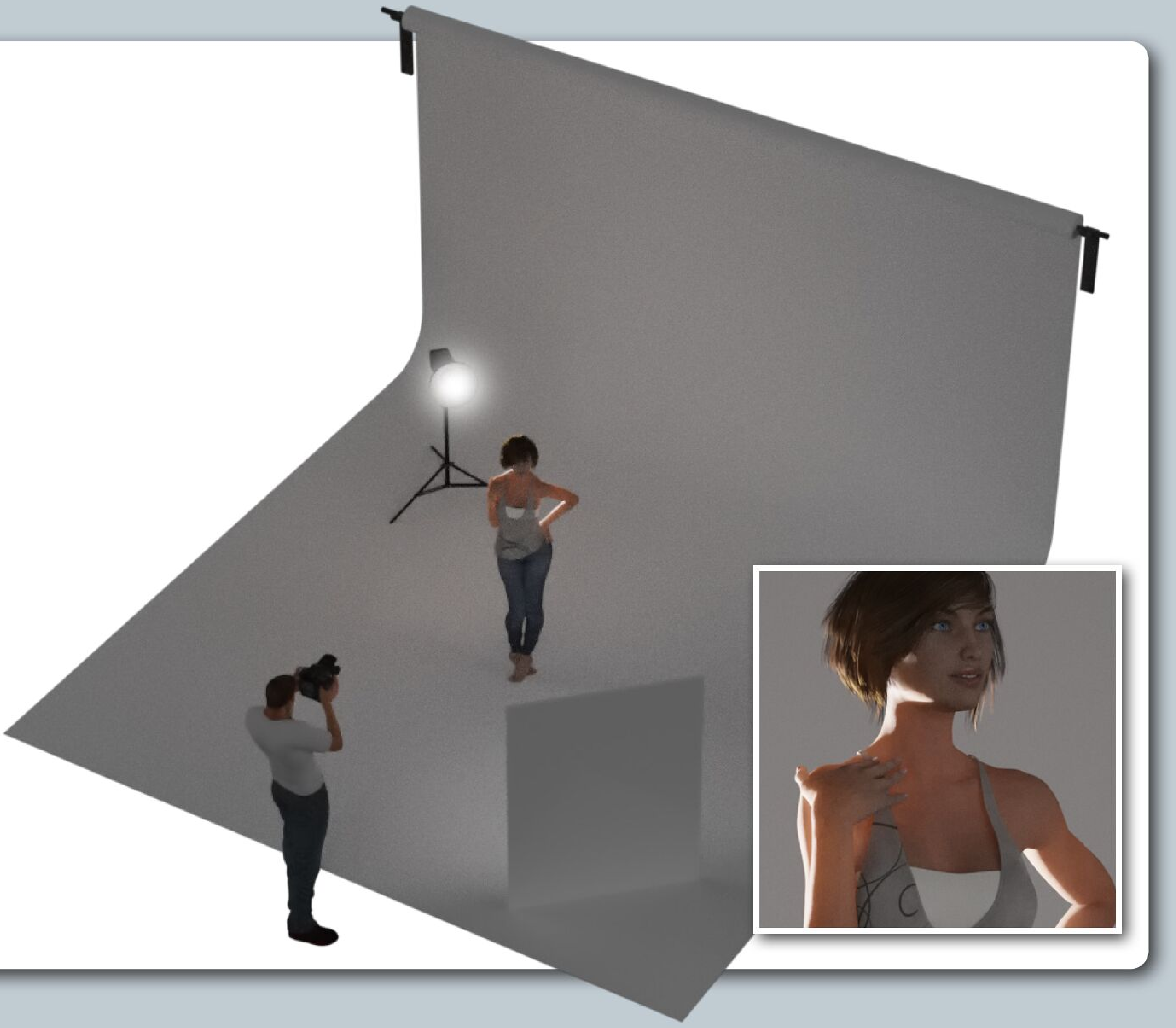
This versatile type of lighting is used widely in most visual media. The three lights are usually positioned equidistant around the subject; by altering the relative brightness of each light, you can decide from what angle your subject is lit. You can backlight them by having the light at the rear as the main key light. You can make one on either side the key light and the others just fill lights, and so on.



2

Backlighting

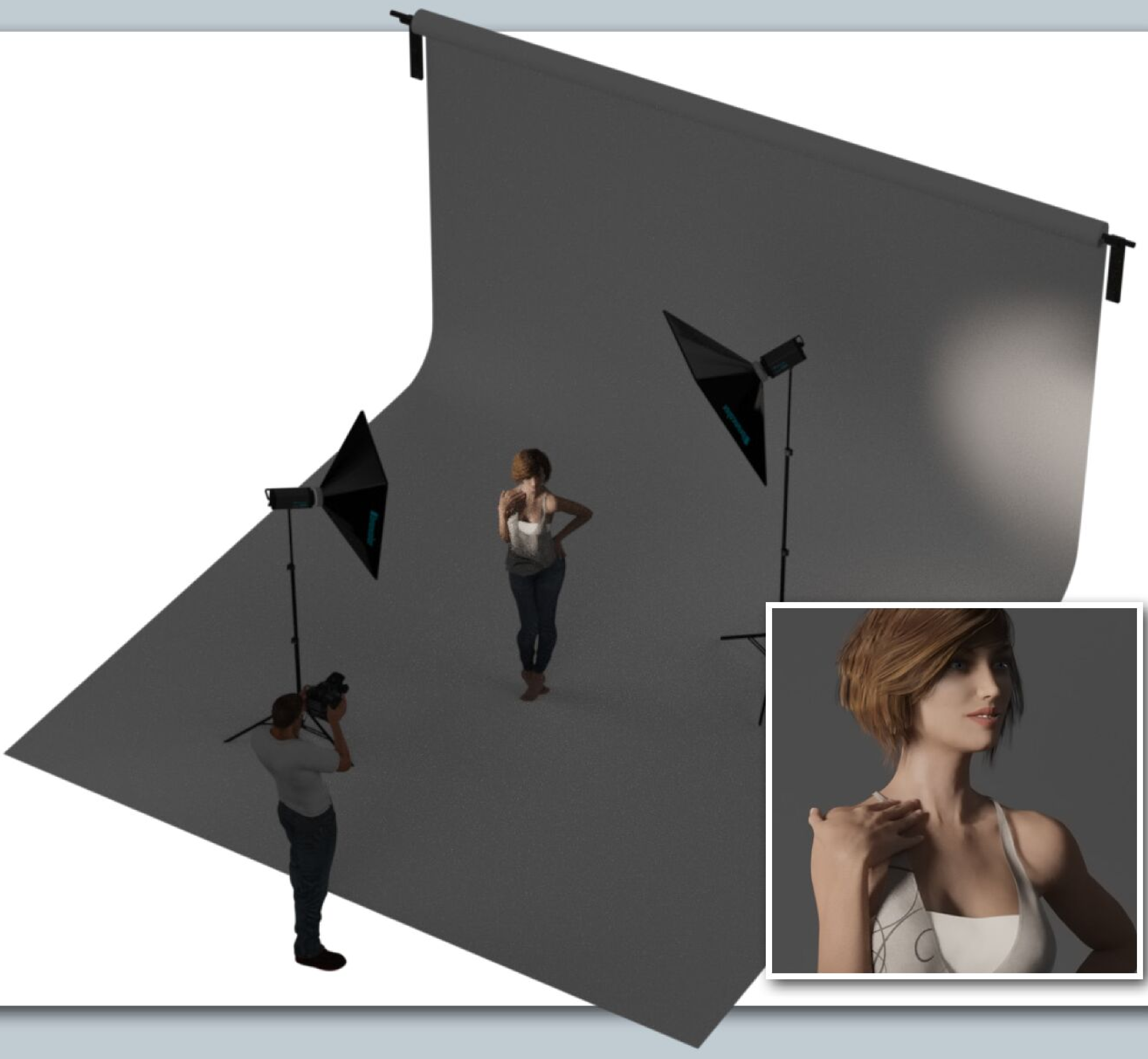
As the name suggests, the light is placed behind your subject. The effect is a bright rim light that envelops the subject, either in part or whole. The subject can be reduced to a silhouette or, if required, a reflector can be used to bounce light back onto the subject for fill. If the light is placed slightly off to one side, you have what is referred to as a kicker light, which creates a bright highlight on one side of the subject. It's used to create some separation of the subject from the background.



3

Broad lighting

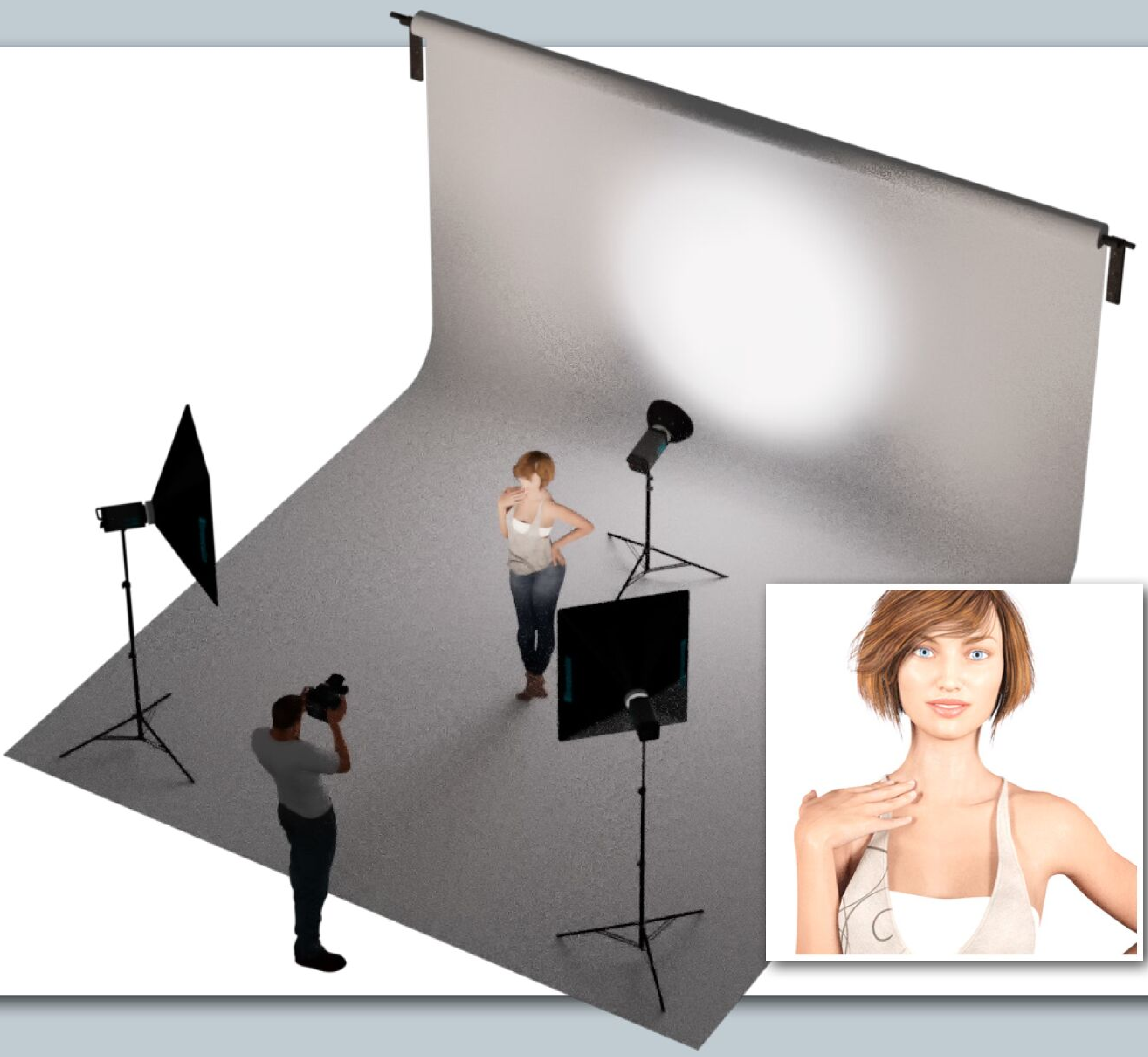
Broad lighting refers to how a subject's face and body is lit. The subject does not face the camera; they are angled off to one side. The wider side of the face/body that is largest and closest to the camera is the side that is illuminated. The narrower part of the face that is furthest from the camera is in shadow. Broad lighting is generally held to be useful for making a slim face appear wider, and for reducing the appearance of wrinkles.



4

High-key lighting

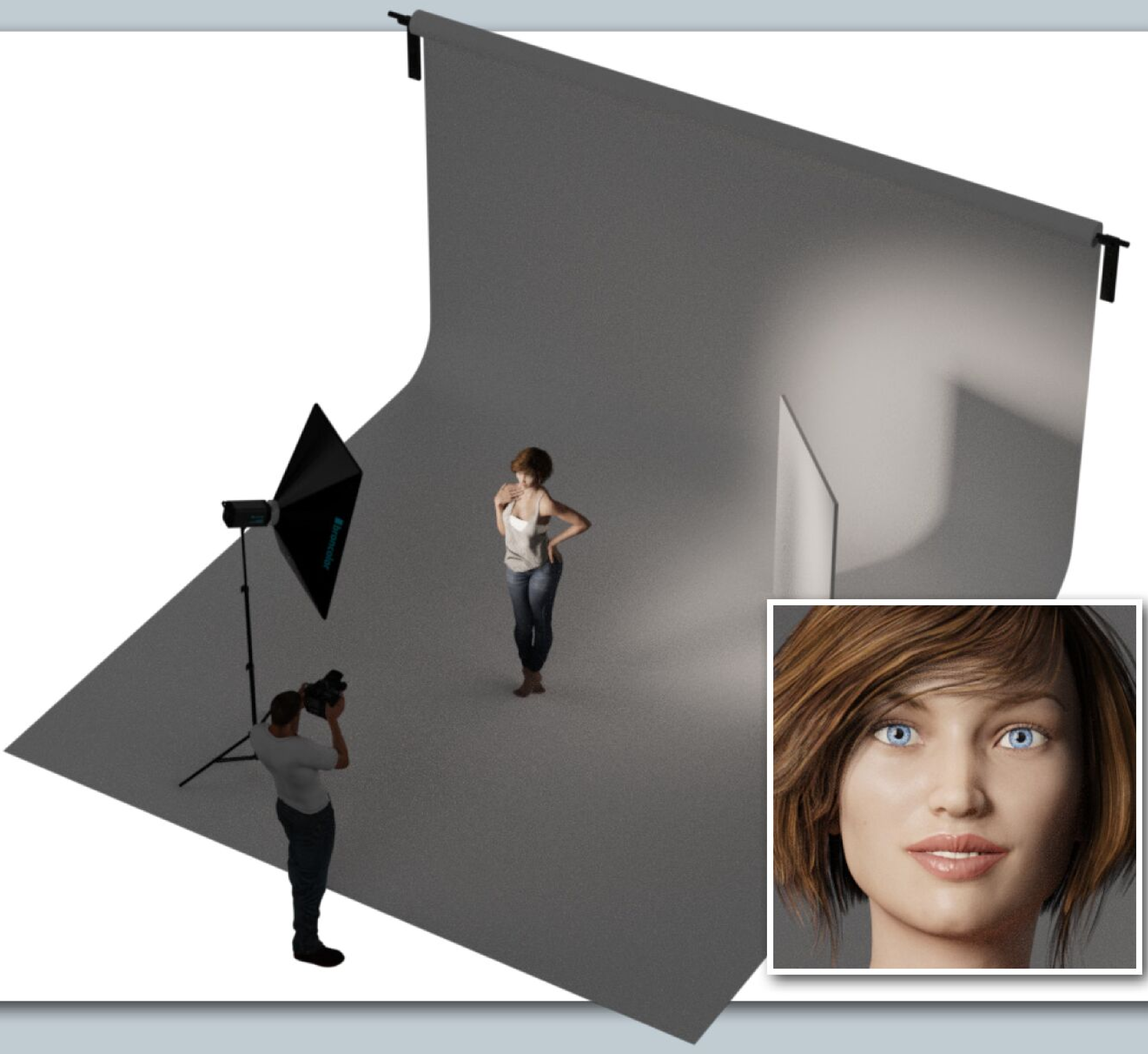
High-key lighting, in its basic form, can be seen as a derivative of the main three-point lighting setup. High-key requires that the lights are at a higher power than is usual, in order to banish as many shadow areas as possible. Some photographers will light their subjects to extreme degrees in order to completely overexpose them. High-key is regarded as an upbeat, light-hearted form of lighting.



5

Loop lighting

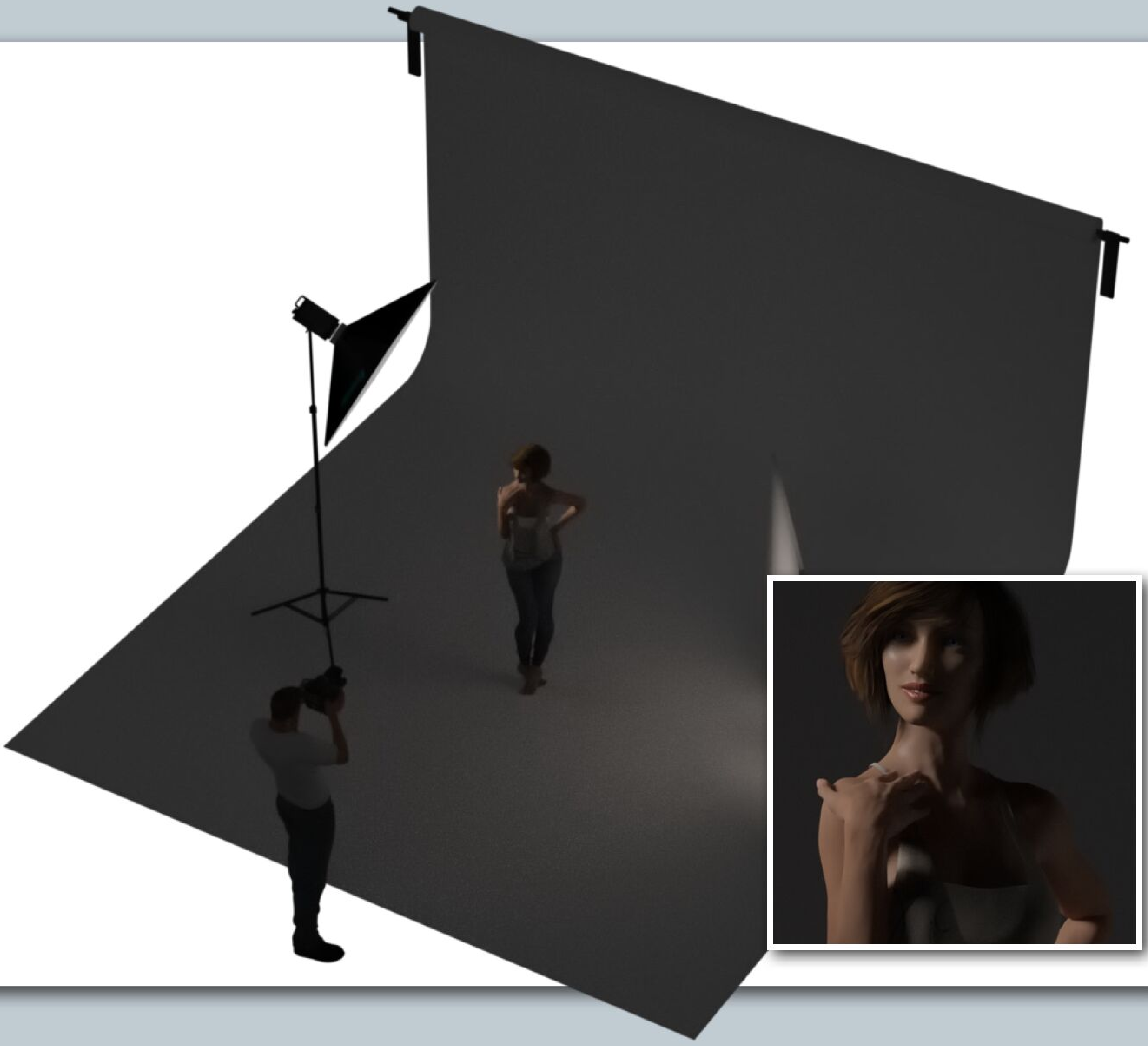
The light is usually placed above your subject's eye-level, roughly 45° from the camera. Loop lighting refers to the small pool of shadow that is cast from the subject's nose on their cheek. Generally you need to keep the light at a sufficiently high angle, such that it creates a shadow that falls slightly downwards but does not touch the cheek area. This method of lighting is very popular, easy to set up, and is flattering for most facial types.



6

Low-key lighting

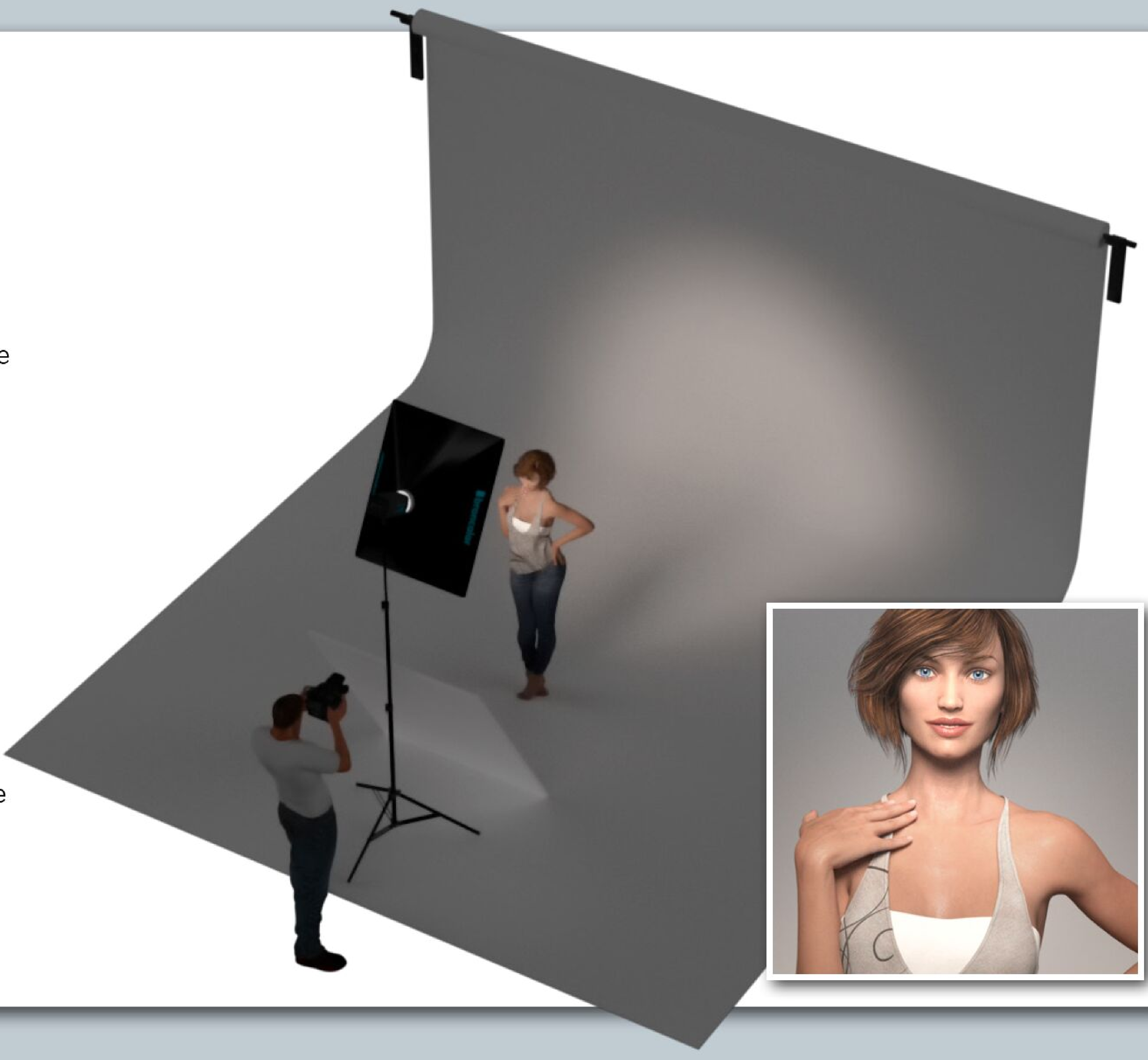
Low-key has been used extensively in all visual media. It creates what is known as the Chiaroscuro effect. This is the use of strong contrasts between light and shadow that helps to define the three-dimensional shape of a subject and give it a sense of volume. Often used with only one light, it is a dark, moody, kind of lighting that can add drama to an image. Additional fill lights or reflectors can be added to control the contrast if required.



7

Paramount lighting

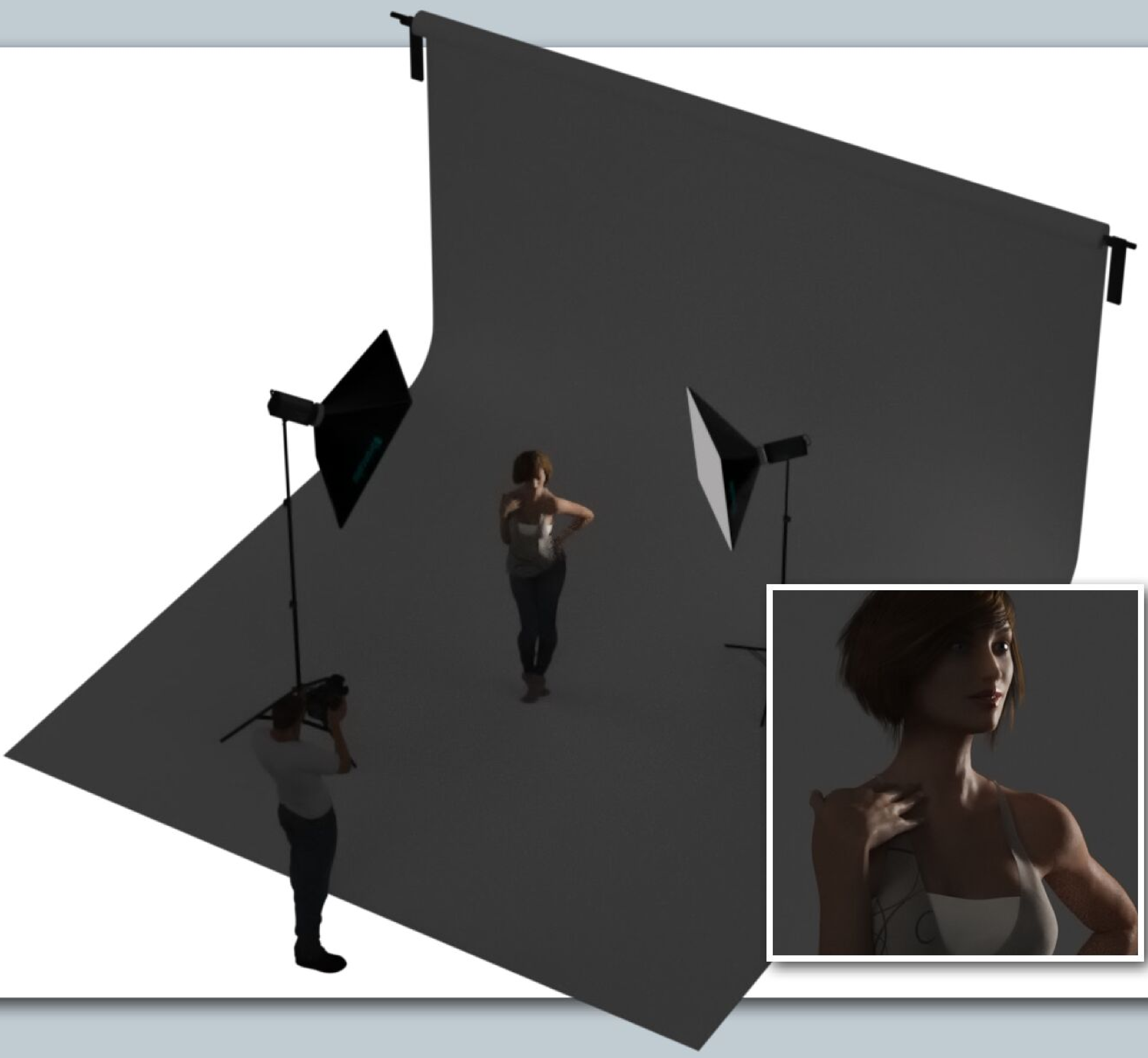
Sometimes referred to as butterfly lighting, this lighting style used to be the signature setup created by the Paramount film studio with which to photograph its leading ladies at the time. The key light faces directly at the subject, and is elevated high above eye-level and angled down onto their face. This method casts a small shadow under the subject's nose in the rough shape of a butterfly. It is a good style to even out skin tone and accentuate cheekbones. It is generally regarded as a more feminine lighting method.

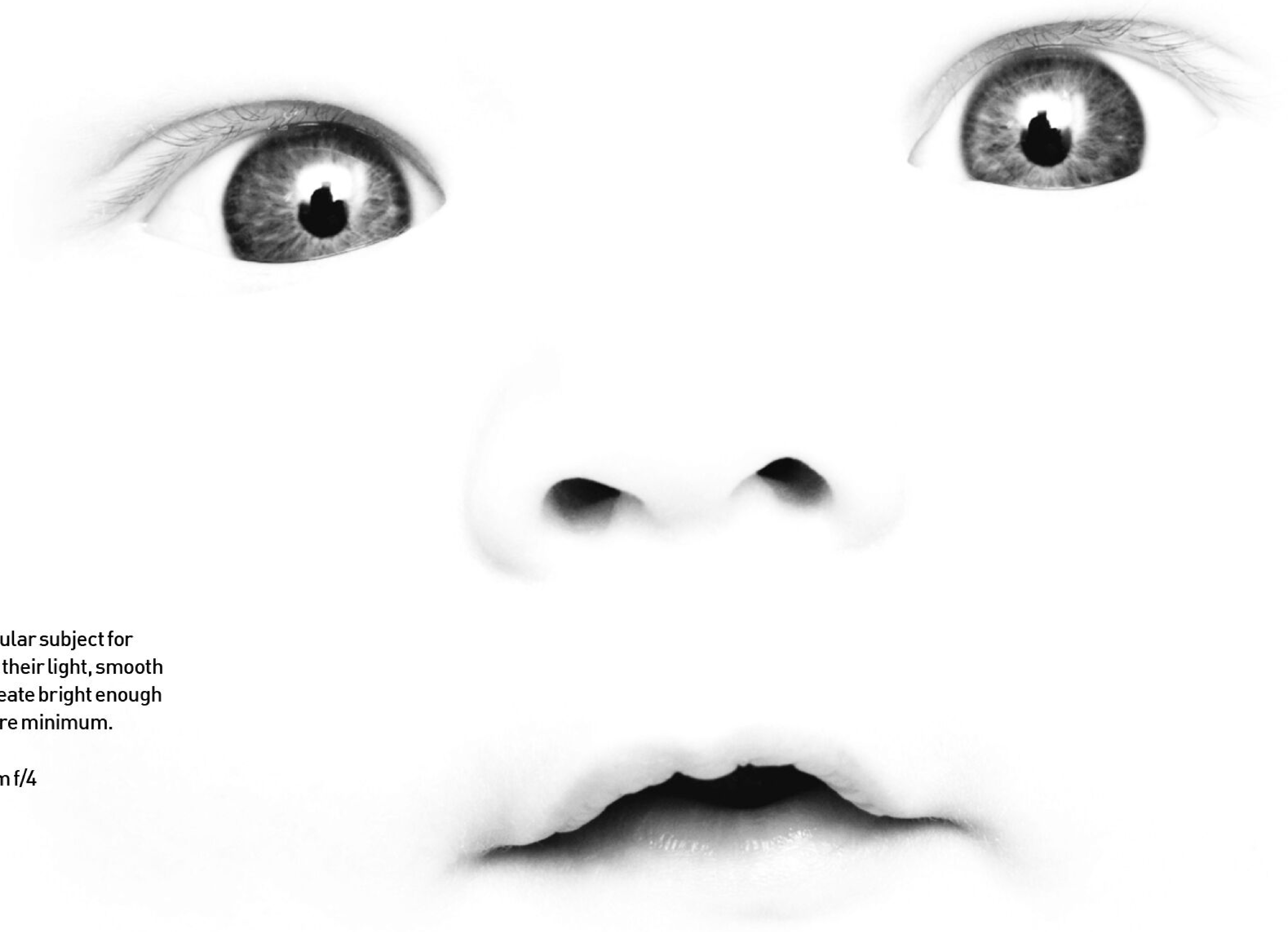


8

Short lighting

Short lighting is the opposite of broad lighting. Once again, the subject is facing away from the camera at an angle. Now, the broadest part of the subject's face/ body is in shadow. The narrowest part that faces away from the camera receives the illumination. More of the face is now in shadow. It's a good style to use for its slimming qualities and adds a more three-dimensional, sculpted feel to the shot.





Baby portraits. Always a popular subject for high-key portrait work. With their light, smooth skin, it is relatively easy to create bright enough images to reduce detail to bare minimum.

Canon 5DMK2 - EF24-105mm f/4
f/4 - 1/160 - ISO 100

High-key portraiture

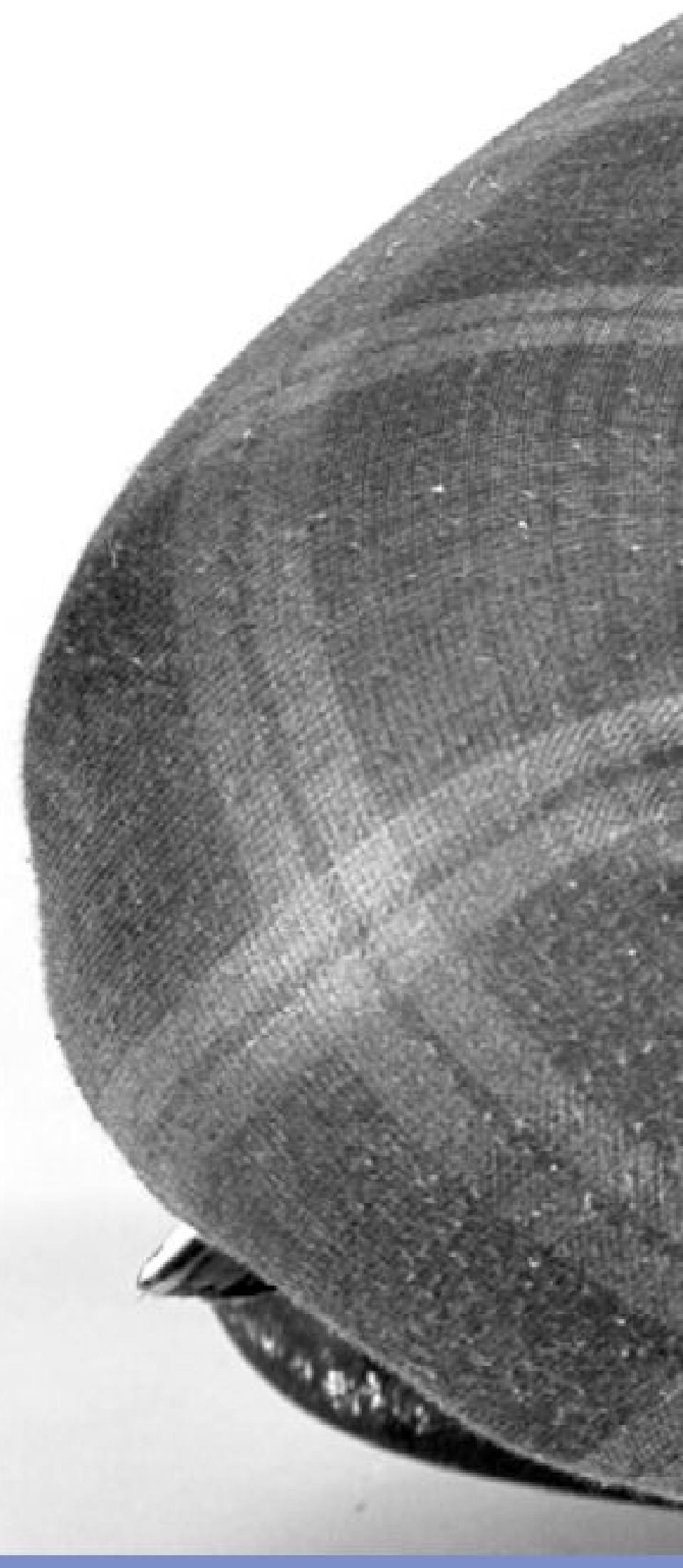
WE GIVE YOU THE LOW-DOWN ON HIGH-KEY LIGHTING FOR PORTRAITS

High-key lighting was originally developed for the film and television industry back in the days when the available technology was not capable of capturing high contrast ratios. A scene that had a large range of tones from deepest black to brightest white would have been impossible to capture with old technology. So, they came up with high-key lighting.

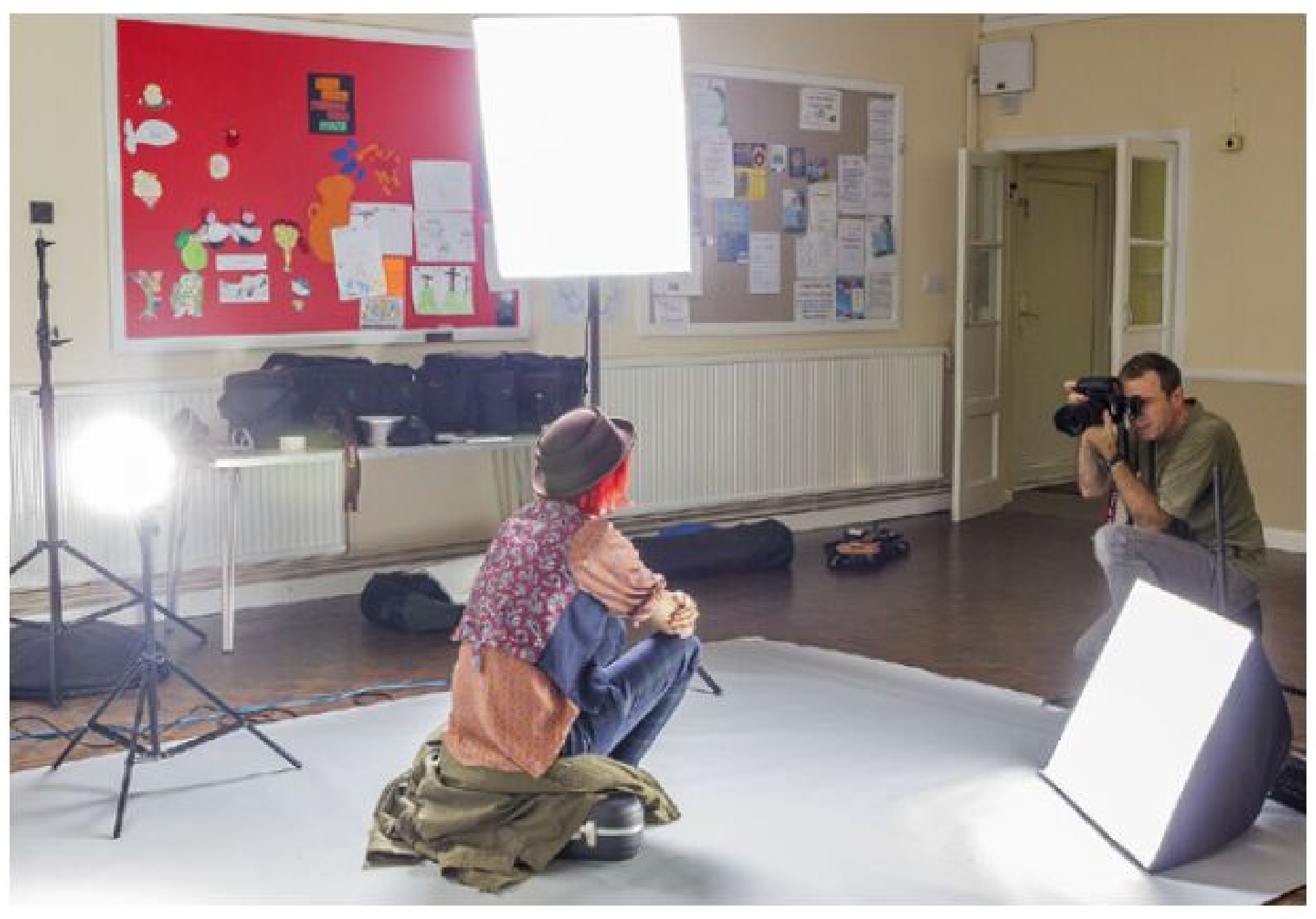
The idea is that increased lighting reduces the range of tones between black and white, or eliminates the darkest shadows altogether, making it easier to capture and display those tones that are in the image. Simply put, black and dark tones are reduced, mid-tone areas become much brighter, and bright and near-white areas are pushed to white. Over time, though, it has become a stylistic and creative option for filmmakers and photographers alike. Many modern studios will shoot this kind of imagery for family and portrait work as it is considered quite contemporary, upbeat and light-hearted.

If you are shooting indoors, the amount of light and general lack of shadows mean that once lights are in place, your subject is not tied down to maintaining one position. They can move around and still be awash with light from all sides. High-key images are also considered very appealing. Images with a larger amount of pale or bright tones are seen as positive, fun and generally attractive. The brighter nature of the shots is also flattering. The removal of shadows and a certain amount of reduced detail can improve a portrait. The further addition of presenting the images in black and white, where the possible confusion of colour has been removed, is also very effective. ■

> "The removal of shadows and a certain amount of reduced detail can improve a portrait."



Epiphone
Les Paul MODEL



Above is the high-key lighting setup used to create this portrait of local musician, Jess. Lots of power was needed to keep the background over-exposed and to begin to wash out some detail.

Canon 5DMK2 - EF24-105mm f/4
f/6.3 - 1/160 - ISO 100

“What constitutes a high-key image appears to be a matter of some creative debate.”

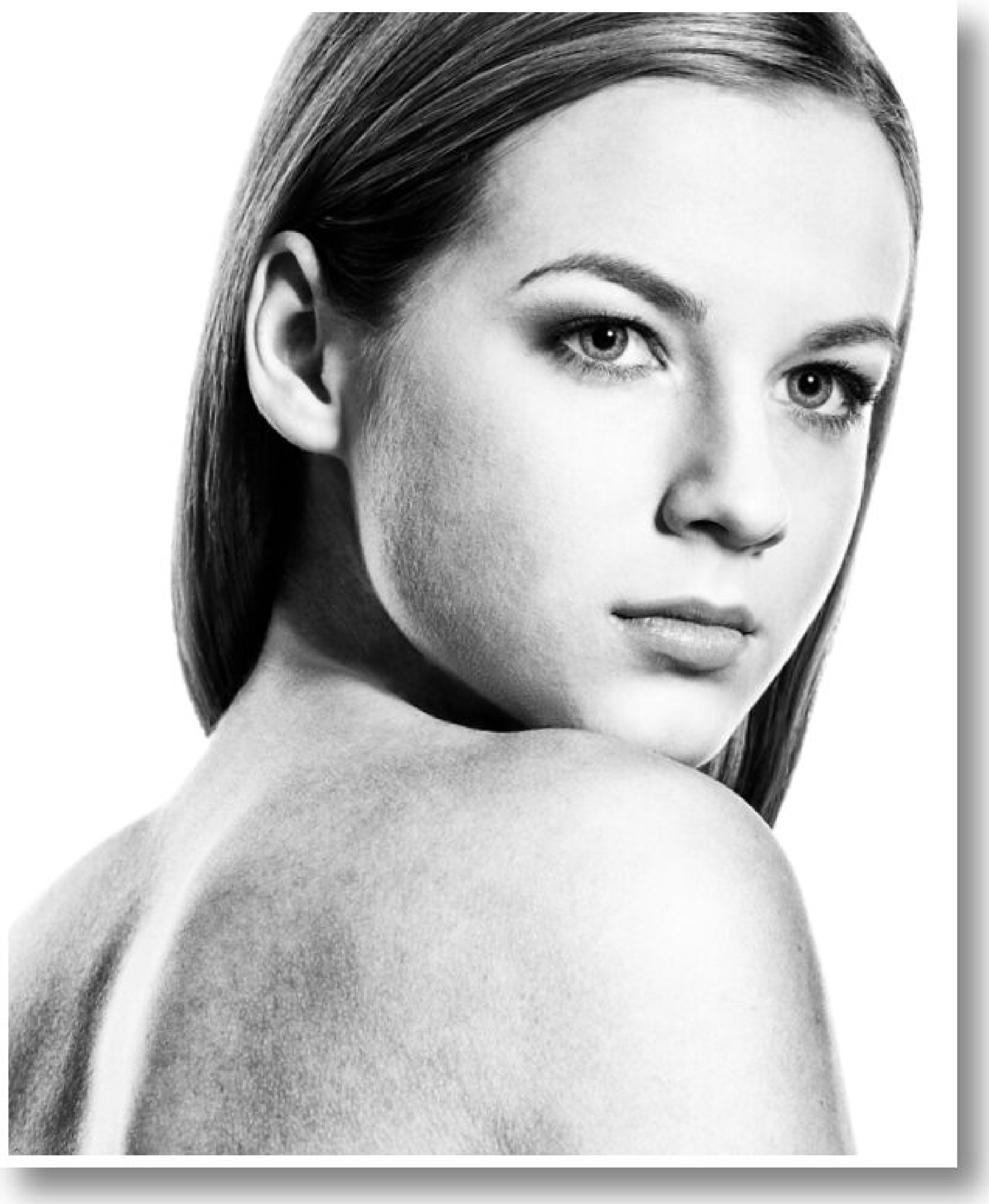
High-key portraiture

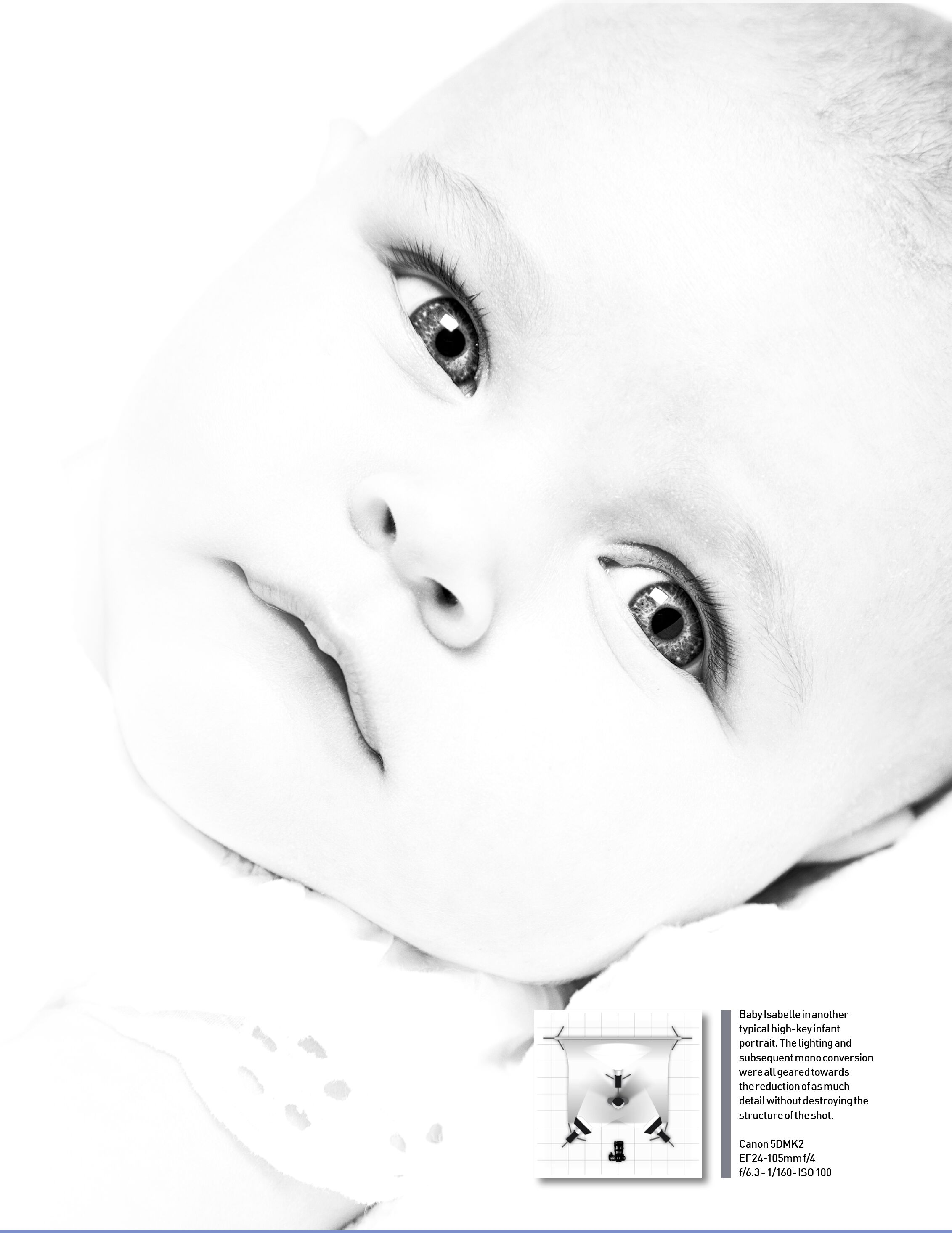
THE GREAT DEBATE; WHAT IS A HIGH-KEY IMAGE?

What constitutes a high-key image appears to be a matter of some creative debate. It is held by artists in some areas, who declare that a high-key image should not contain deep shadows and have limited areas of dark tones: essentially, a low contrast image. Some will say that a generally well exposed mid-tone subject, with a pure white background, constitutes a high-key photo. Still more will take the image to extreme levels of overexposure, with much detail being lost in the process, to leave the barest amount of detail and tonal range.

A general rule is that a high-key image when viewed as a histogram, either on your camera's LCD display or within your favourite Raw processing application, has its average tones to the far right of the histogram. The further to the right, the brighter the image. It is often referred to as ‘shooting to the right’. This is done as a result of either deliberate overexposure of an already bright scene at the shooting stage, or lighting the scene in order to achieve a histogram pushed to the far right. Your approach to shooting and lighting high-key may develop over time, but ‘shooting to the right’ can be a good starting reference.

High-key photography is not always something that can be done well with post-processing alone. Solid lighting elements in the original shooting setup have to be in place to ensure a well-balanced high-key image. If the image you shoot is not lit correctly, you may not be able to process your way out of the problem, so this is something to bear in mind. You have plenty of light falling on your scene, but you need to make sure your exposures are set to get the brightest areas pushed as close to absolute white as you can, even going into overexposure to keep the greatest ratio of tones in the mid-tone and lighter areas. Shadows, although you can have them, are as minimal as possible. Make sure that you also shoot with as low an ISO setting on your camera as possible. This gives you some processing overhead if you find you do need to do some heavy tweaking of your images after the shooting stage. Given the amount of light you are employing in your shots, fast shutter speeds should be no problem to achieve. Depth of field and aperture are creative choices, but you may be limited by the sync speeds your camera and flash can achieve. ■

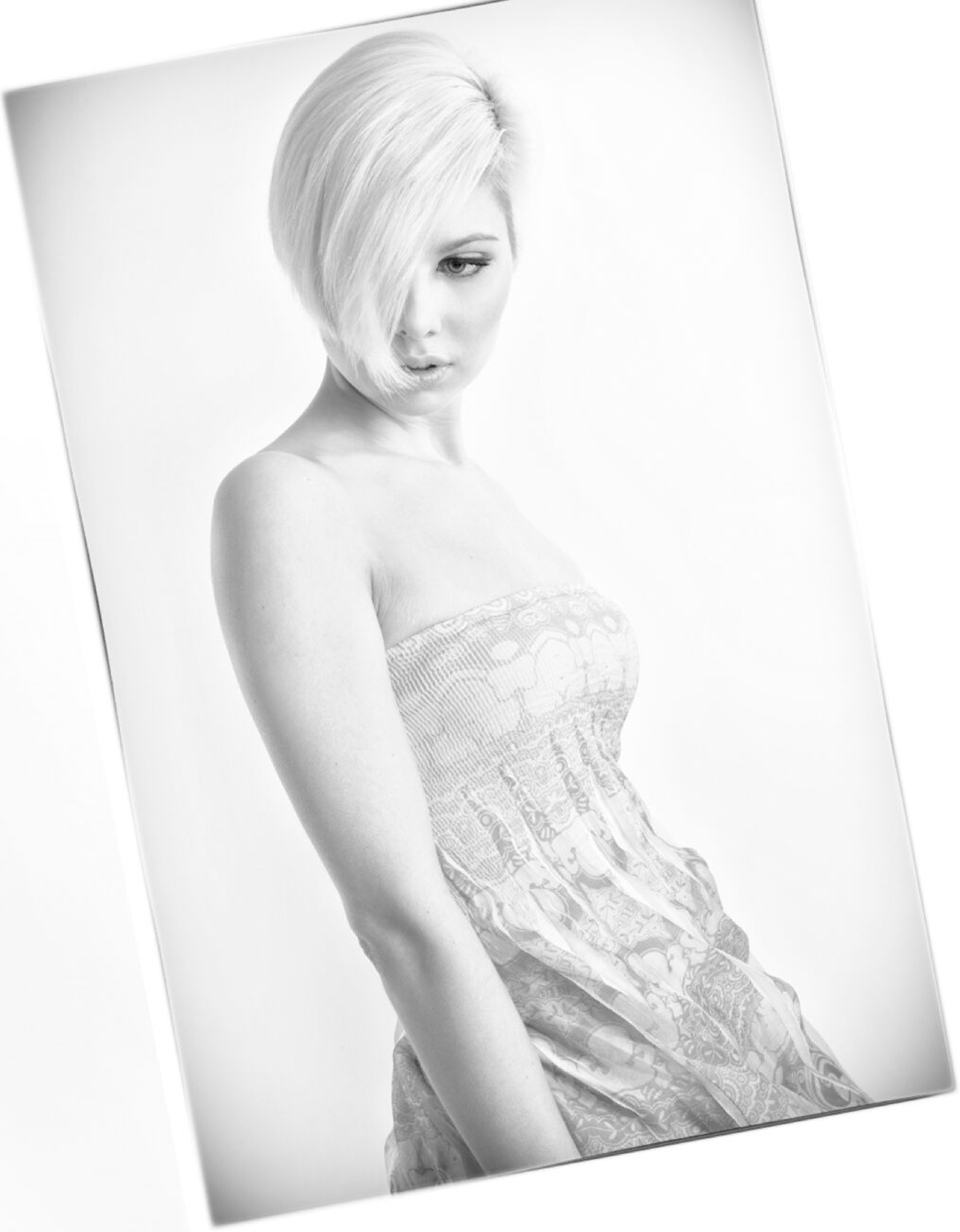


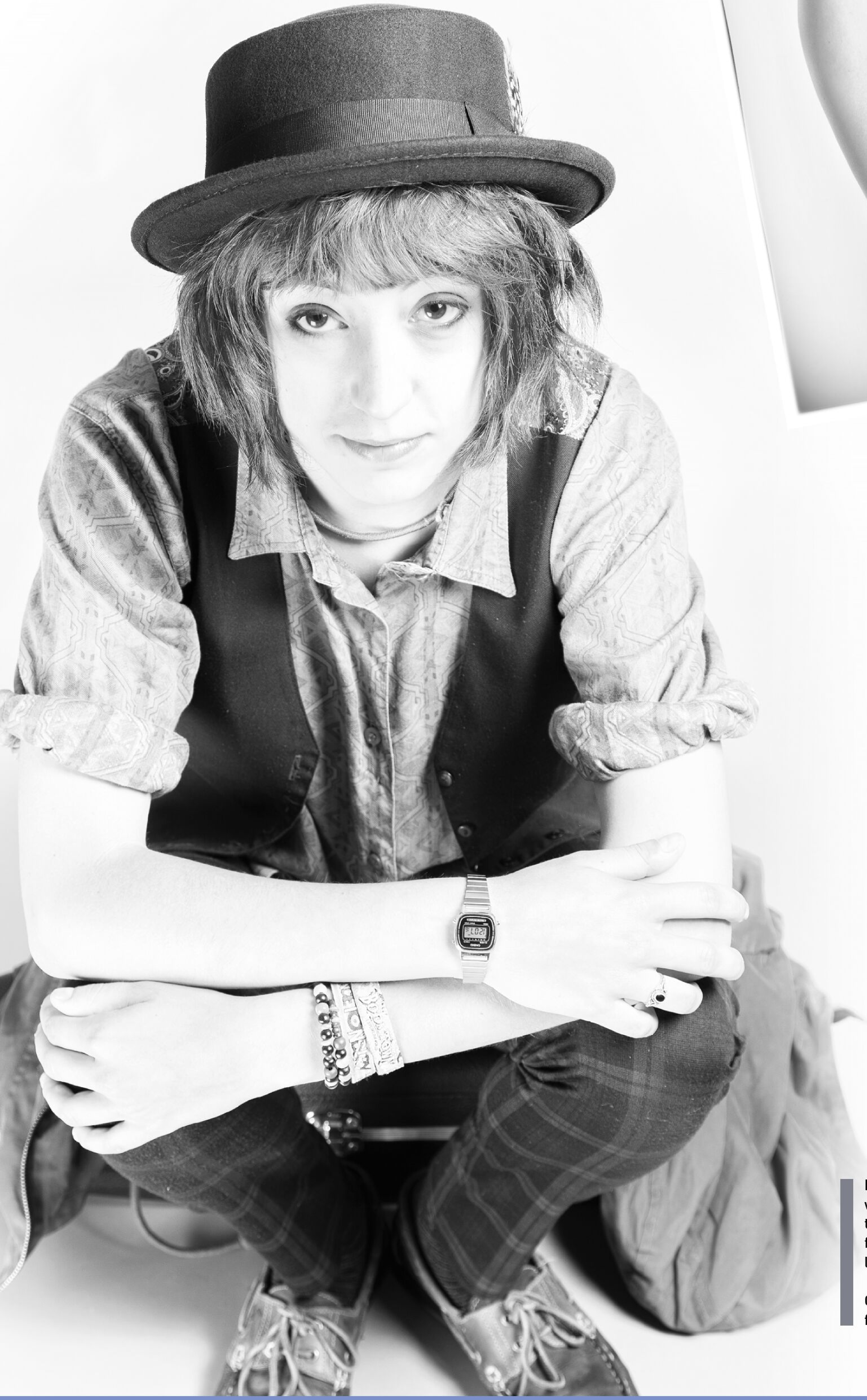


Baby Isabelle in another typical high-key infant portrait. The lighting and subsequent mono conversion were all geared towards the reduction of as much detail without destroying the structure of the shot.

Canon 5DMK2
EF24-105mm f/4
f/6.3 - 1/160 - ISO 100

Although the background is not blown out to absolute white, this is still considered a high-key shot because it is still a low contrast image. Viewed on a histogram, the images' main concentration of tones will still be on the right-hand side.





Musician Jess, has a very eclectic style that works well as a high-key image. The image was shot as far to the right of the histogram as possible and then further processed in Photoshop to brighten the lightest tones to pure white.

Canon 5DMK2 - EF24-105mm f/4
f/5.6 - 1/160 - ISO 50

This form of high-key portraiture became so popular, many portrait studios developed it as their main style. Studios such as Venture used it a lot for children and infant portraits. It is a bright, happy style, ideally suited to children's portraits in particular.

The clothing you wear for a high-key will obviously have an impact on the final result when seen in mono. In the case of Dom here, he wore a white t-shirt which had a lot of its detail reduced when lit by two key lights.

Canon 5DMK2 - EF24-105mm f/4
f/7.1 - 1/160 - ISO 100

> "...with low-key you often need only one light to get a great dramatic portrait."

Low-key portraiture

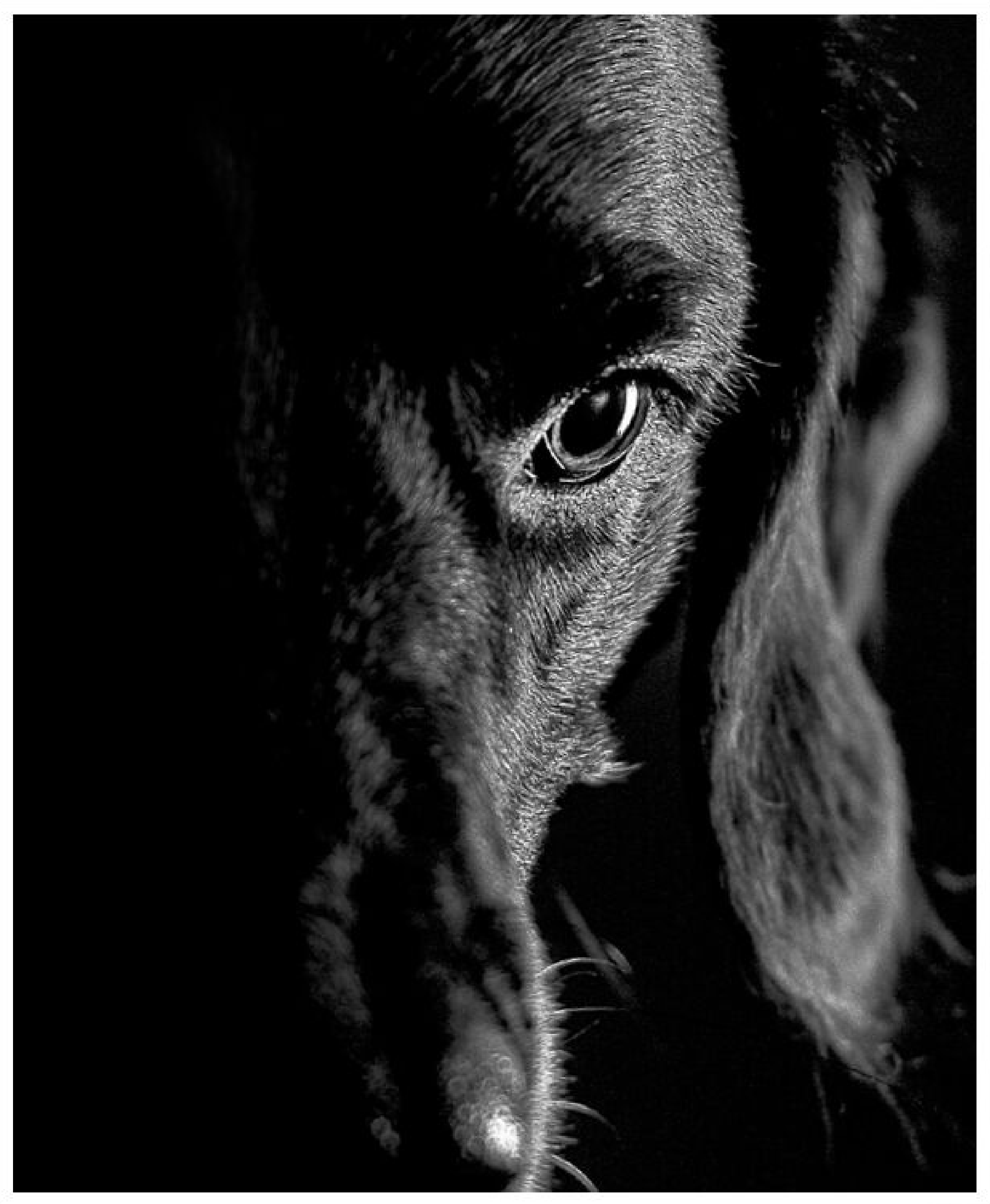
WELCOME TO THE DARK SIDE WITH LOW-KEY LIGHTING FOR PORTRAITS

Low-key lighting is widely used in all the various visual media such as film, television and photography. It is used to add drama to a scene or image. Its mood is generally the complete opposite of high-key. It is dark, brooding, mysterious, and dramatic. Low-key is also a simpler setup than its counterpart. You are often using three or more lights for high-key work; but with low-key you often need only one light to get a great dramatic portrait. An absence of light is what is needed here, with just your subject illuminated, creating high contrast images.

Shooting with one light in a dark setting also means you can shoot in locations that would normally be no good for any other kind of lighting. Because your subject is essentially the only thing in the scene that is lit, you can shoot in your own front room if you want to, without the need for large studio space, providing you don't need to shoot very wide and your flash is not reflecting off anything that might show up in the final image. A large black sheet as a backdrop is one additional item that will help eliminate any parts of your home showing in the shot. You can just keep your flash power low, move it in close to your subject, and shoot away.

It is not unheard of for photographers to shoot low-key images in daytime outdoor locations such as car parks. It then becomes a case of having enough space in which to work with no distracting objects nearby. You'll have to use camera settings that, on their own, render the scene black; then introduce a light source very close to the subject at sufficient power to provide enough illumination for them to be seen in the shot, but not spill onto anything else in the immediate vicinity. ■

Motörhead
The World Is Yours



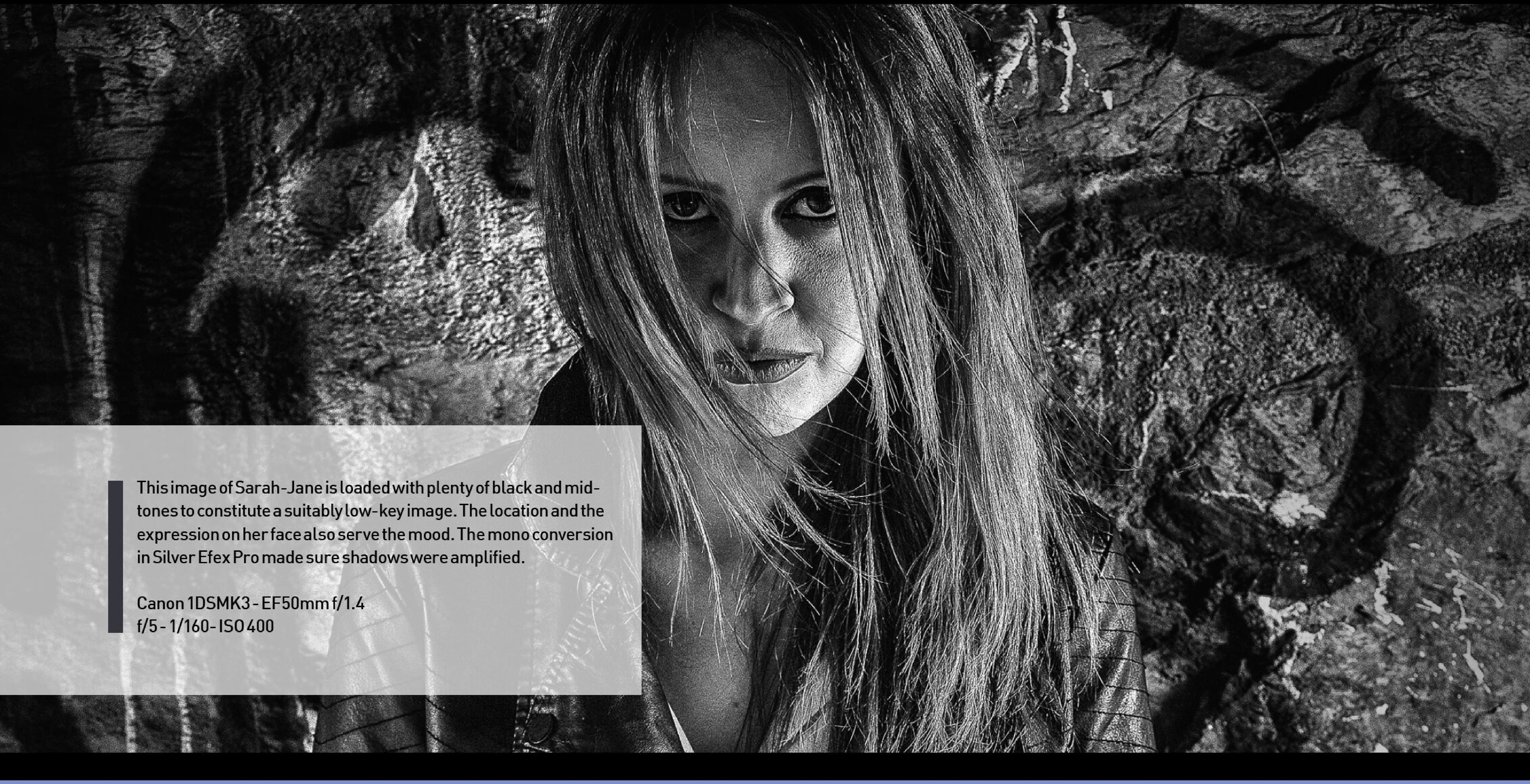
Low-key portraiture

SOME KEY INSIGHTS ON SHOOTING LOW-KEY PORTRAITS

Whereas high-key photography is seen as the process of ‘shooting to the right’, where all the brightest tones are packed on the far right of the histogram. Low-key, as you might imagine, is the reverse of that. A proper low-key shot will have the majority of the tones in the histogram far to the left, even to the point where shadows are ‘clipped’ and therefore totally black. It is perfectly suited to being converted to black and white, often looking more striking than its colour counterpart. Bear in mind that, although you are capturing a predominantly dark image, it is how you control those tones that will create a striking and memorable low-key image. Because you are normally using a one light setup, it is easy to keep moving the light around.

You can experiment with the placement of the light at different heights and angles. It is up to you to ’sculpt’ the light that falls on your subject. Remember that it is the very small amounts of light tones and highlights in your image that guide the feel of the shot you are trying to make.

Just as with high-key, keep your camera on as low an ISO setting as you can get. Obviously, your shutter speeds are a key factor. You need to keep shutter speeds well in excess of 1/60th second to try and avoid camera shake. With a moving subject, or the use of a longer lens, you will need to go up to 1/125th or faster. In fact, the faster the shutter speed, the more chance you have of eliminating any ambient light that might spoil the shot. The resulting aperture must also be within the range that your flash can effectively light. If you have settings that mean you are using an aperture of f/16, then your flash must also be able to provide enough power to illuminate your subject at the distance you require. If not, then you will need to move your flash much closer to your subject, or increase the ISO so you’re not working your flash beyond its limits. The closer you can get your image looking how you want it ‘in camera’, the more processing latitude you will have when working with the image in Photoshop. Dark images that are pushed too much can be very noisy in the shadow areas, so keep that in mind. ■



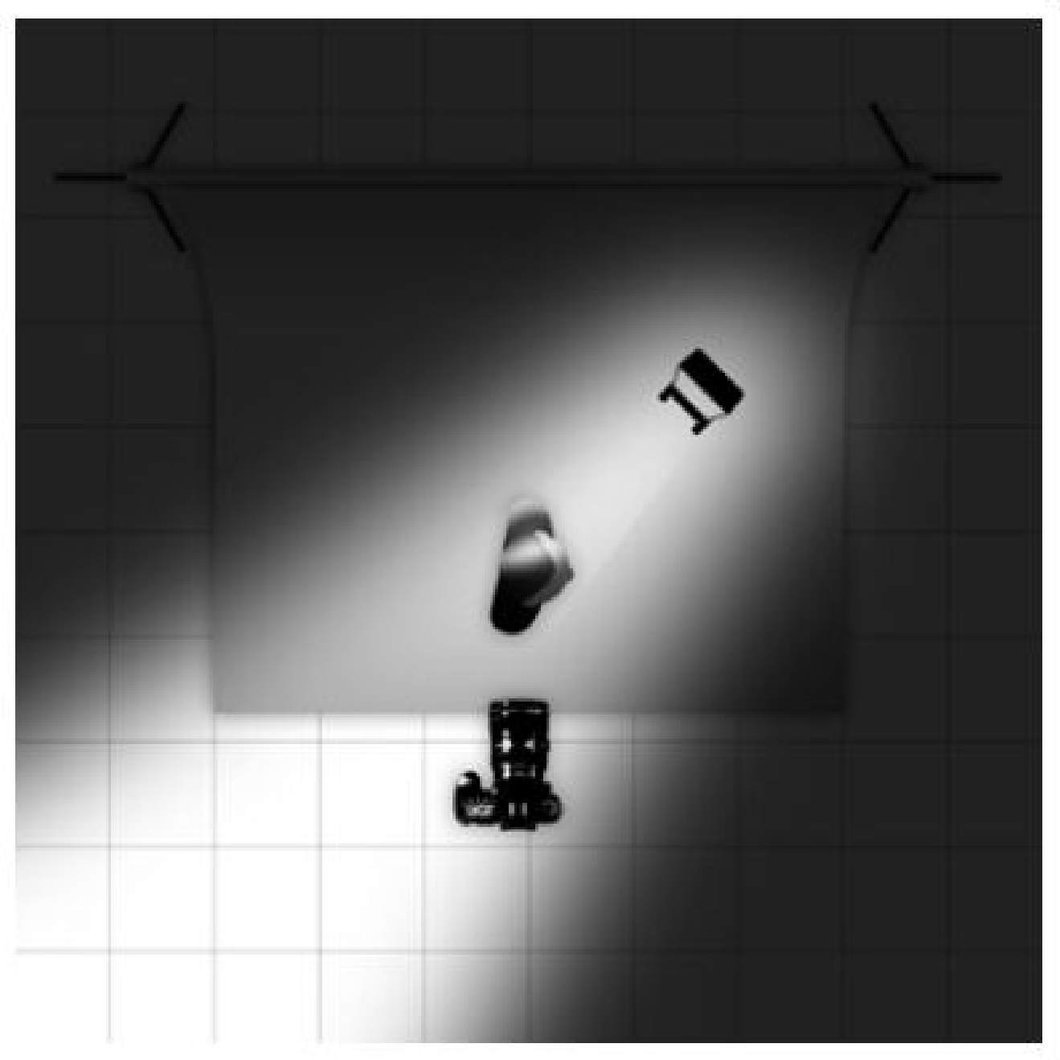
This image of Sarah-Jane is loaded with plenty of black and mid-tones to constitute a suitably low-key image. The location and the expression on her face also serve the mood. The mono conversion in Silver Efex Pro made sure shadows were amplified.

Canon 1DSMK3 - EF50mm f/1.4
f/5 - 1/160 - ISO 400

> “It is perfectly suited to being converted to black and white, often looking more striking than its colour counterpart.”

Using the same lighting setup as Steve on the previous page, this portrait of Dave was lit from the opposite side. Dave was turned slightly more to camera and the smoke from his cigarette was highlighted perfectly.

Canon 1DSMK3 - EF50mm f/1.4
f/2.8 - 1/160 - ISO 50

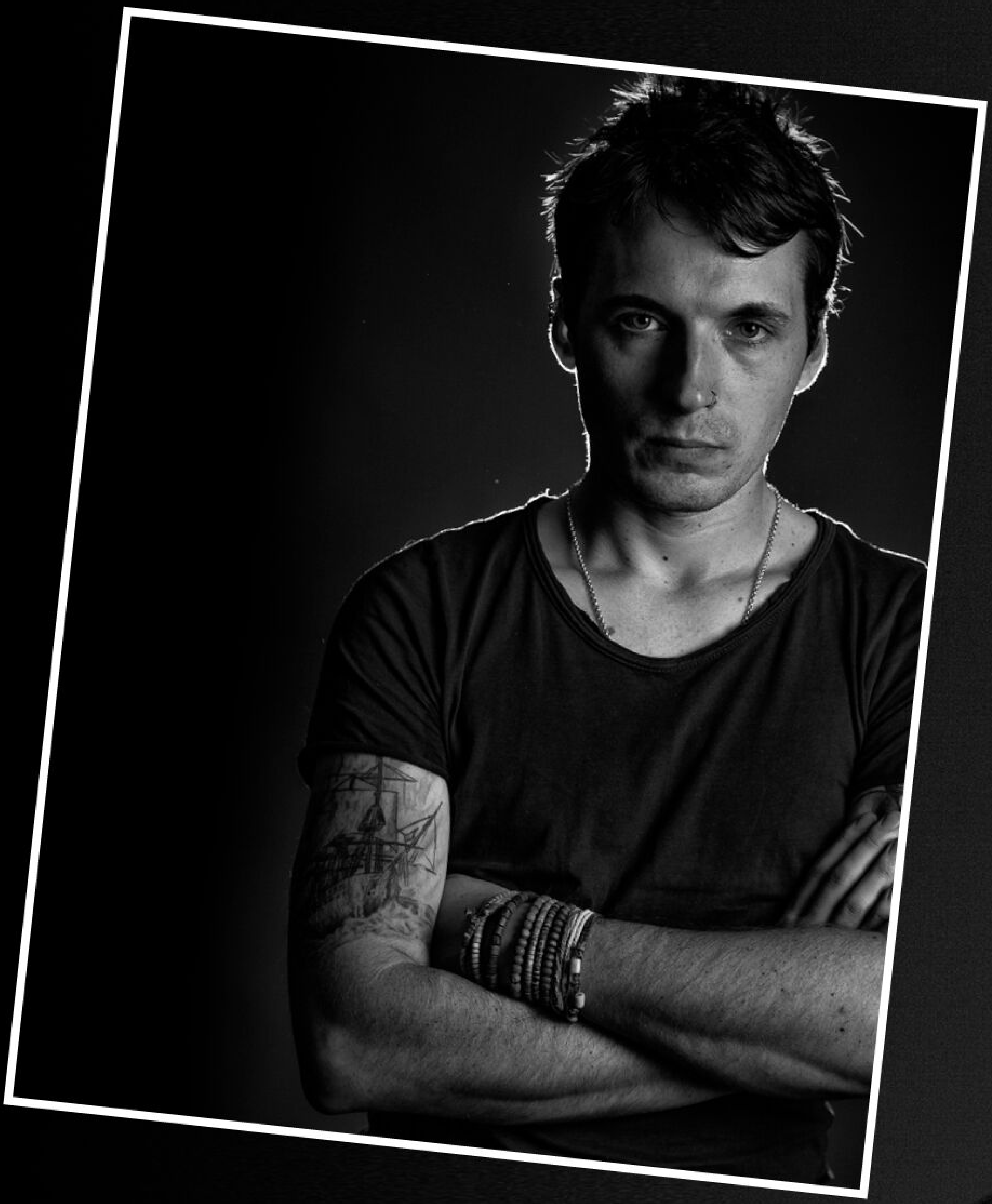


Bear in mind that portraits extend to more than just people. Here, Jazz and Willow are lit by a single Canon Speedlite with a beauty dish attached placed slightly above and behind them

Canon 1DSMK3 - EF50mm f/1.4
f/4 - 1/160 - ISO 125

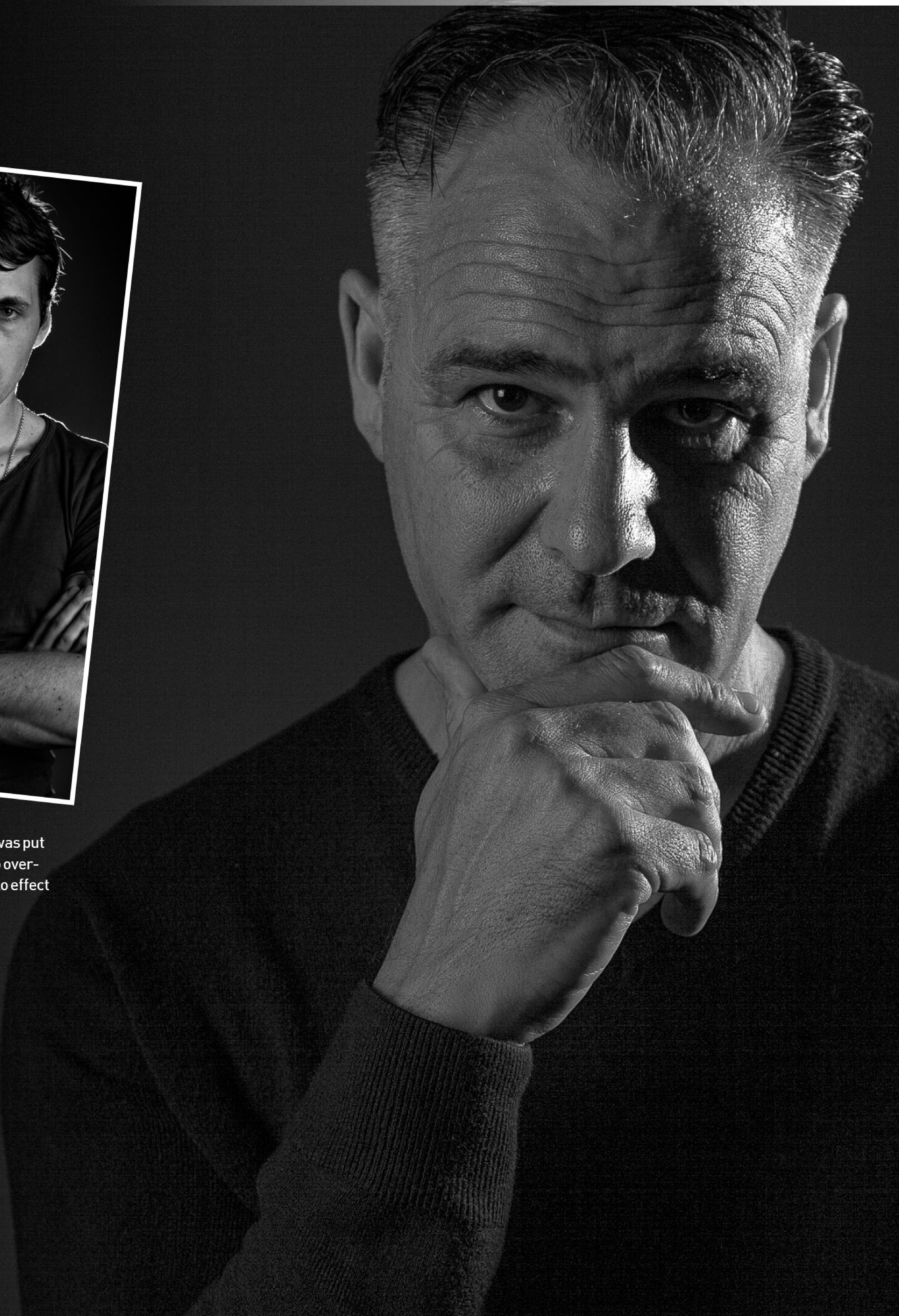
Although not perhaps the most traditional way of shooting a female portrait, Jess was side-lit to camera right and a reflector placed camera left to create a dark, jazz-club style portrait of a saxophonist.

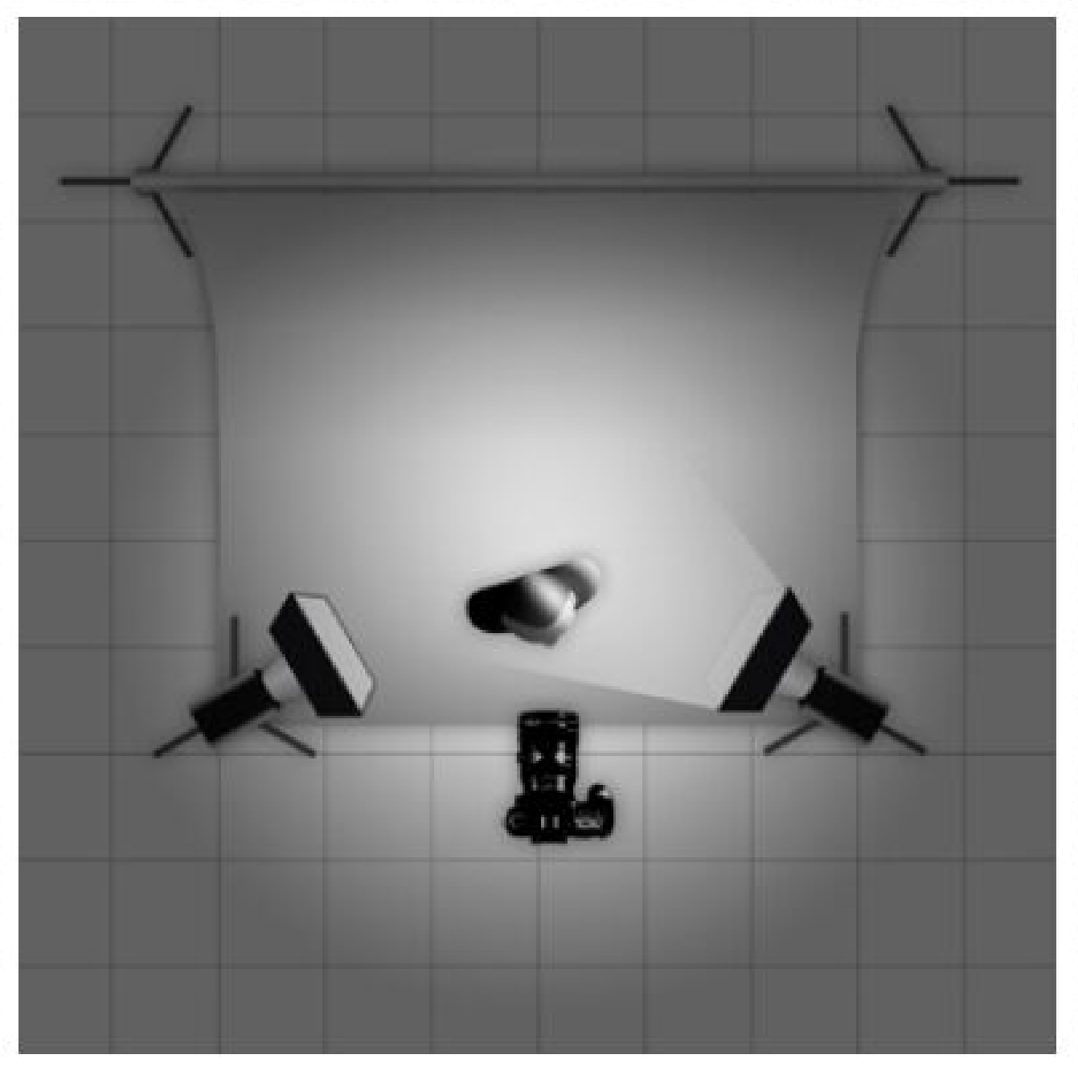
Canon 5DMK2 - EF24-105mm f4
f/5.6 - 1/160 - ISO 50



In addition to a key-light to camera right, another flash was put directly behind Dan, pointing at his shoulders, and set to over-expose by about 2-stops. This creates an interesting halo effect that separates his outline from the dark background.

Canon 1DSMK3 - EF50mm f/1.4
f/7.1 - 1/160 - ISO 100





Tim, in thoughtful repose, was lit by one key-light to camera right, and a second light to camera left at much reduced power to stop the dark side of his face falling into deep shadow.

Canon 5DMK2 - EF24-105mm f/4
f/5.6 - 1/160 - ISO 100

BEFORE

MONO LANDSCAPE PHOTOGRAPHY

The rocky northern end of Tresco in the Isles of Scilly. Converted to mono directly in Adobe Camera Raw with high Clarity values to bring out detail in the stone.

Canon 5DMK2 - EF24-105mm f/4
f/18 - 120 sec - ISO 50

Landscape photography tips

USEFUL TIPS TO TRANSFORM YOUR LANDSCAPE PHOTOGRAPHY

For many people new to the world of photography, one of the easiest and most accessible areas first explored with a new camera is the great outdoors. And why not? You don't need a studio or masses of expensive equipment; there is plenty of available light, unless you're feeling adventurous and want to try night photography; and beautiful seaside or countryside scenes are usually not too far away by car or a brisk walk.

Landscape photography is an amazing and rewarding experience for both novice and seasoned professional. Whether it's just a record of a day trip you've made to a new location or a more serious professional endeavour, landscapes, when taken well, are able to instill all sorts of emotions in the person looking at the shot. Even if it is that most mundane of emotions summed up in the simplest way: 'wish you were here'. So you have a new camera and you are itching to get out there and start snapping away, filling one memory card after another, right? Before you do, why not take a quick look at our essential photography tips.

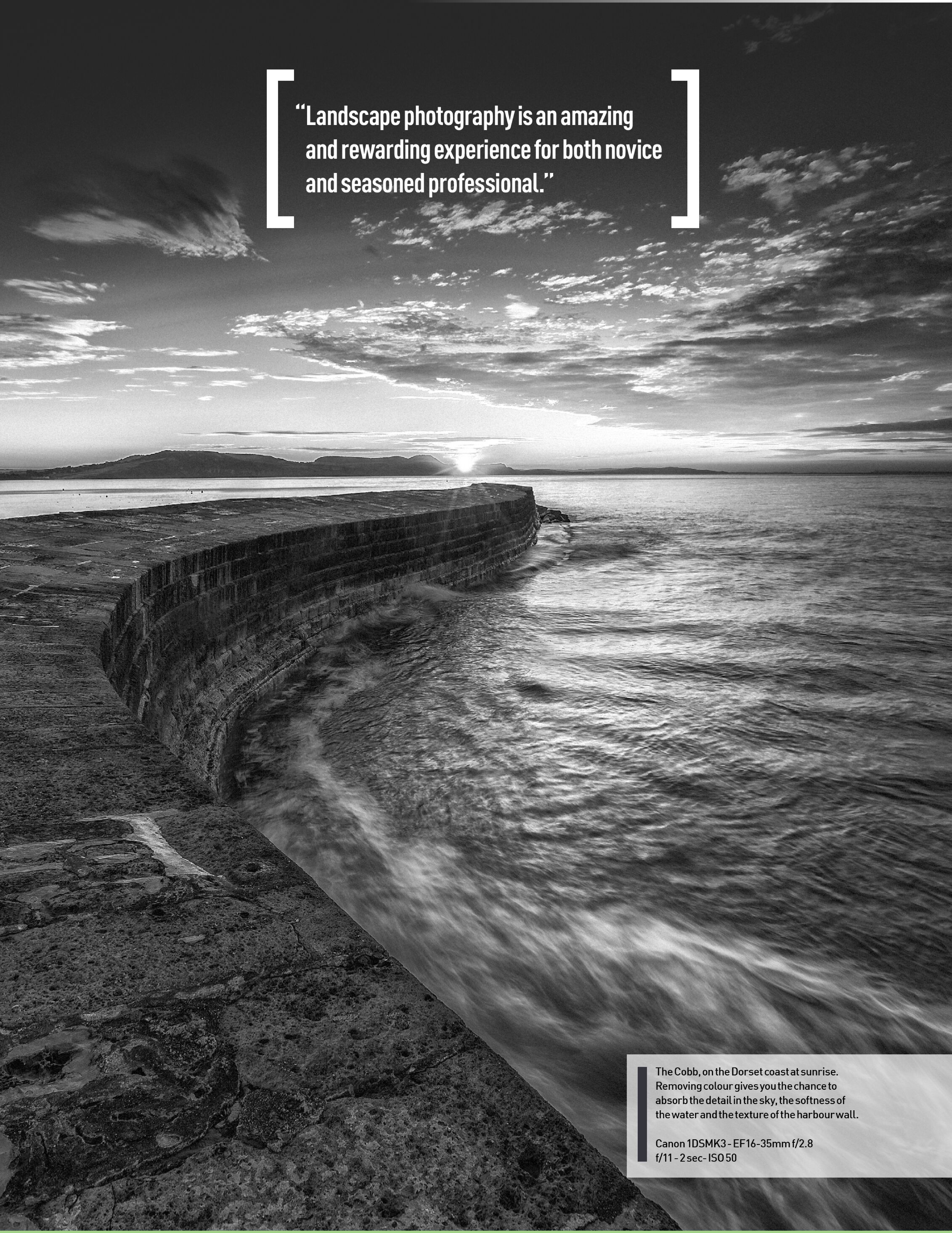
Although there is no real right and wrong to shooting landscapes, there are a few tips that can elevate your shots and have them stand out against the general background noise of countless dull shots.

Landscapes are an excellent subject to convert into black and white. You only have to look at the work of Ansel Adams to appreciate that fact, but first you have to get out there and capture your source material before you can even think about mono conversions.

Over the next few pages we have a handy quick reference section that is an essential guide to the main hints, tips and tricks to help you plan and execute your landscape photography and make it the best it can be. ■

Thunder Hole in Torquay. Another mono conversion in Adobe Camera Raw, with the Blue Greyscale Mix set to negative values to darken the blue sky. Additional levels and sharpening adjustments were made in Photoshop to finish off the image.

Canon 1DSMK3 - EF16-35mm f/2.8
f/9 - 15 sec - ISO 50



> “Landscape photography is an amazing and rewarding experience for both novice and seasoned professional.”

The Cobb, on the Dorset coast at sunrise. Removing colour gives you the chance to absorb the detail in the sky, the softness of the water and the texture of the harbour wall.

Canon 1DSMK3 - EF16-35mm f/2.8
f/11 - 2 sec - ISO 50

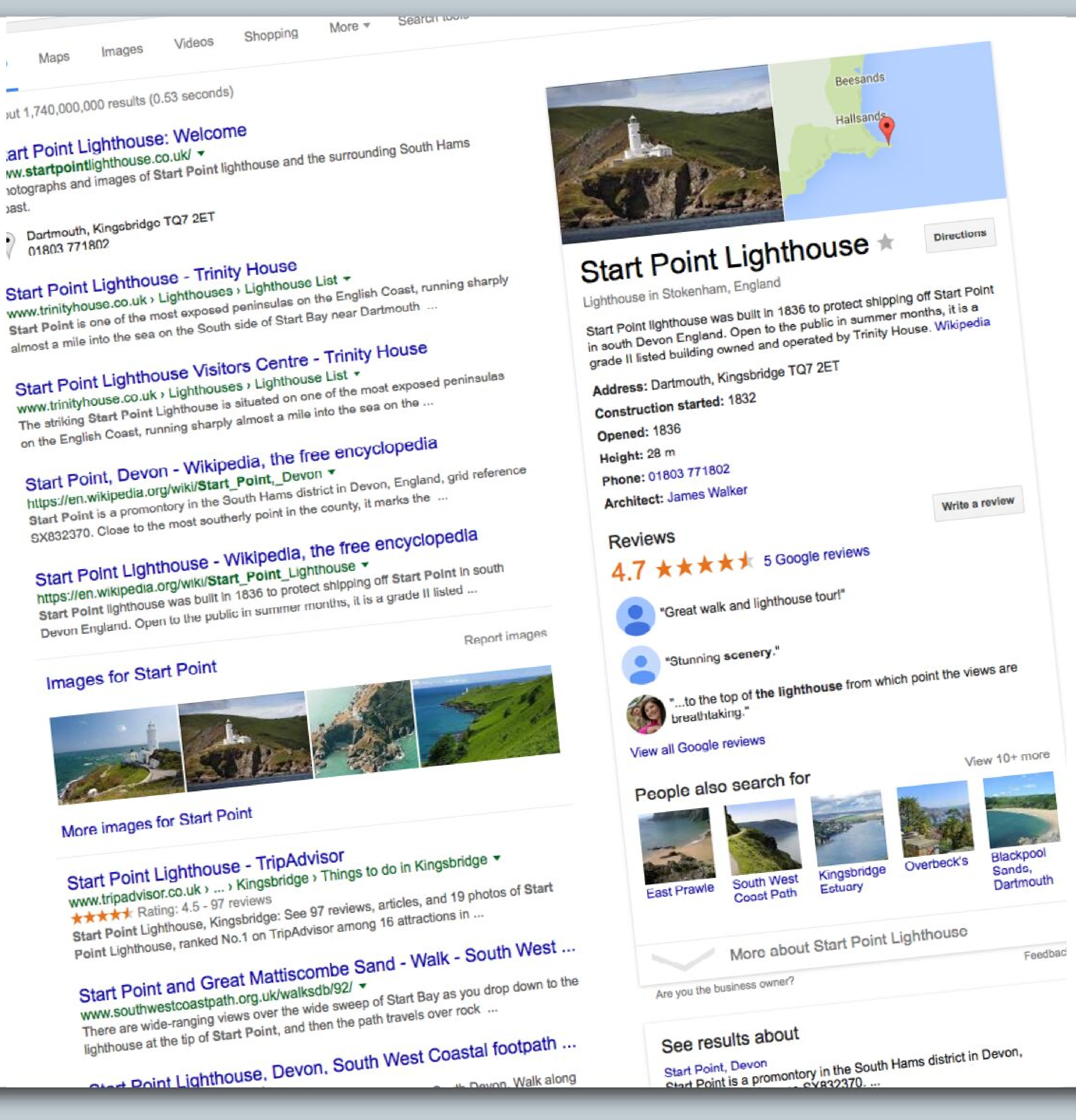
LANDSCAPES

Landscape photography tips

1

Research your location

Take time to research your possible shooting destination if you have not been there before. Just Googling the location you want to shoot will call up all sorts of information. Most of it may be useless to you, but you can guarantee that there will be examples of other photographs taken there. The experiences of other photographers in this location will give you the heads-up as to whether it is an easy or difficult place to reach. There may be tips concerning local by-laws and the best nearby parking spots etc.



ut 1,740,000,000 results (0.53 seconds)

art Point Lighthouse: Welcome
w.startpointlighthouse.co.uk/ ▾
otographs and images of **Start Point** lighthouse and the surrounding South Hams
ast.
Dartmouth, Kingsbridge TQ7 2ET
01803 771802

Start Point Lighthouse - Trinity House
www.trinityhouse.co.uk › Lighthouses › Lighthouse List ▾
Start Point is one of the most exposed peninsulas on the English Coast, running sharply almost a mile into the sea on the South side of Start Bay near Dartmouth ...

Start Point Lighthouse Visitors Centre - Trinity House
www.trinityhouse.co.uk › Lighthouses › Lighthouse List ▾
The striking **Start Point** Lighthouse is situated on one of the most exposed peninsulas on the English Coast, running sharply almost a mile into the sea on the ...

Start Point, Devon - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/**Start_Point**,_Devon ▾
Start Point is a promontory in the South Hams district in Devon, England, grid reference SX832370. Close to the most southerly point in the county, it marks the ...

Start Point Lighthouse - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/**Start_Point**_Lighthouse ▾
Start Point lighthouse was built in 1836 to protect shipping off **Start Point** in south Devon England. Open to the public in summer months, it is a grade II listed ...

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Start Point Lighthouse - TripAdvisor
www.tripadvisor.co.uk › ... › Kingsbridge › Things to do in Kingsbridge ▾
★★★★★ Rating: 4.5 - 97 reviews
Start Point Lighthouse, Kingsbridge: See 97 reviews, articles, and 19 photos of **Start Point** Lighthouse, ranked No.1 on TripAdvisor among 16 attractions in ...

Start Point and Great Mattiscombe Sand - Walk - South West ...
www.southwestcoastpath.org.uk/walksdb/92/ ▾
There are wide-ranging views over the wide sweep of Start Bay as you drop down to the lighthouse at the tip of **Start Point**, and then the path travels over rock ...

Start Point Lighthouse, Devon. South West Coastal footpath ...

Start Point Lighthouse ★

Lighthouse in Stokenham, England

Start Point lighthouse was built in 1836 to protect shipping off Start Point in south Devon England. Open to the public in summer months, it is a grade II listed building owned and operated by Trinity House. Wikipedia

Address: Dartmouth, Kingsbridge TQ7 2ET
Construction started: 1832
Opened: 1836
Height: 28 m
Phone: 01803 771802
Architect: James Walker

Reviews
4.7 ★★★★★ 5 Google reviews

"Great walk and lighthouse tour!"

"Stunning **scenery**."

"...to the top of **the lighthouse** from which point the views are breathtaking."

View all Google reviews

People also search for

More about Start Point Lighthouse

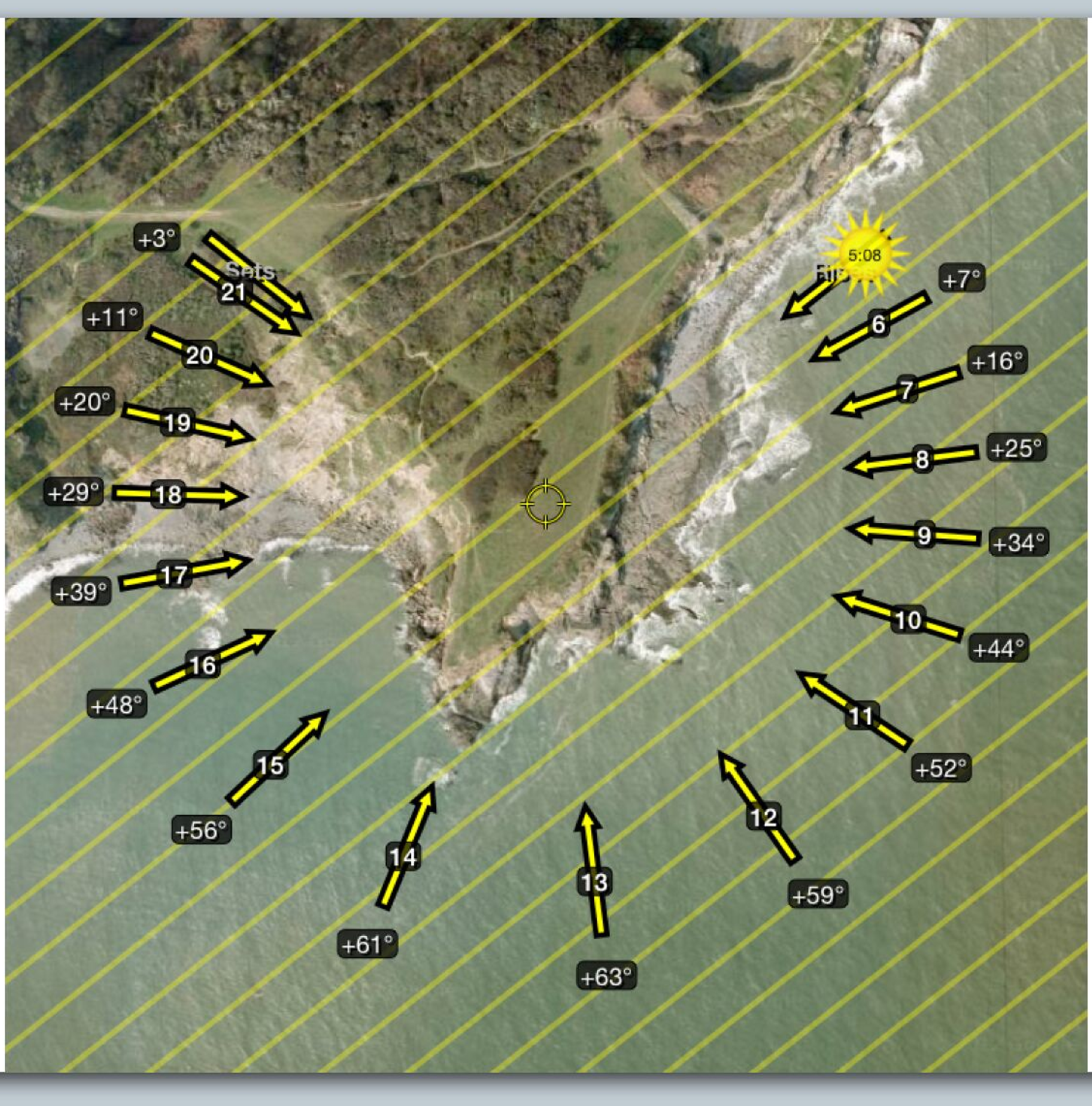
Are you the business owner?

See results about
Start Point, Devon
Start Point is a promontory in the South Hams district in Devon,

2

There's an app for that

There are apps available that can tell you where the sun will be at any point on any given day. These apps can overlay information on a map of your given destination, showing where the sun will rise and fall, and where it will track through the sky on whichever day you choose. This is great for working out what time is best for you to shoot in the location you are researching. Shooting near sunset is a boon for the black and white photographer as shadows are long and contrast is high. There is also the possibility of capturing powerful silhouettes. Sunseeker for iOS and Sun Surveyor for Android are two great examples of these types of app.



3

Be prepared

Make sure you dress for the conditions you are shooting in. If you are going to be on rough terrain, then sturdy shoes are essential. A sprained ankle, miles from anywhere, could be very unpleasant. Travel light if possible, and the purchase of a good quality rucksack or rough-terrain camera bag will stand you in good stead for your journey. Make sure someone knows you are out there and that you have your phone with you at all times. You never know.

4

Visualise the shots

Take the time to actually look around the landscape you are in. Before taking any photos, scan your surroundings and try to visualise where the best shots may be taken from. In fact, sometimes it is good practice to go to a location in advance of taking any actual shots and just walk through the landscape, taking note of the best positions, angles and viewpoints for future reference. Create a list that you can reference when you arrive to take the shots in earnest. Keep in mind the key requirements the image needs when converted to black and white. Form, composition, light and texture will define your shot when seen in black and white.

Landscape photography tips

5

Don't lose it

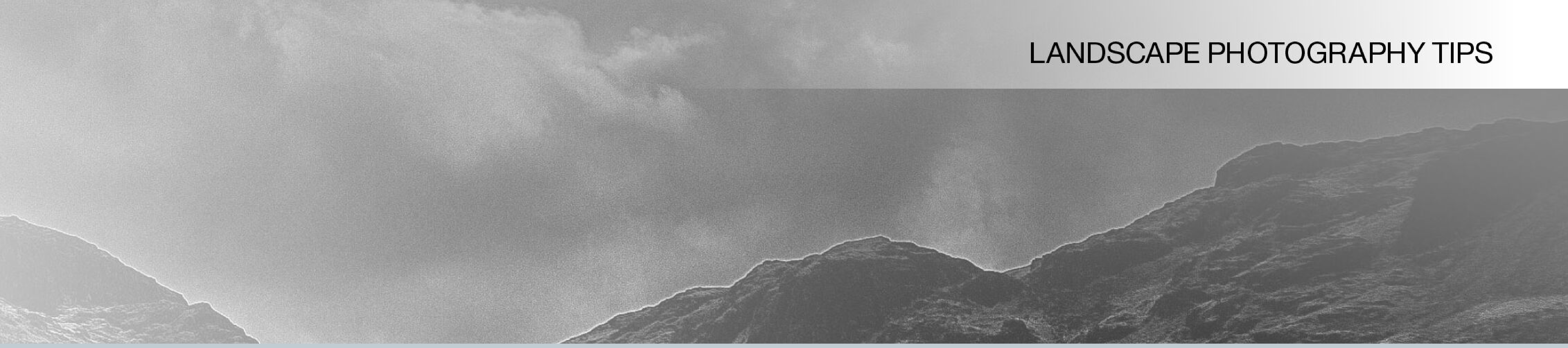
A handheld GPS unit may be a bit of a luxury, but if you are out wandering the hills and valleys and happen upon some quiet unseen beauty spot, a GPS device can mark its co-ordinates to enable you to find it again if you wish to return to shoot more images. Manufacturers such as Garmin have a range of devices starting at reasonable prices. Let's face it, the GPS might also prove to be a lifesaver if you get lost in the middle of nowhere and need to find your way back to your car.

GPSMAP 64st
GARMIN
FIND
MARK
QUIT
ENTER
MENU
PAGE
OUT
IN

6

Boots are made for walking

Be prepared to walk far and wide. The best landscape shots are most often the ones that are well off the beaten track. Driving to a local beauty spot and taking a shot from your car window will not yield images that are exceptional and different. The person in the next car taking the same shot will attest to that. If you want great shots, you have to get out of your car and start walking to find that spot or viewpoint that no one else can see - at least, not from the car park anyway.



7

Light fantastic

In photography you may hear reference to 'the golden hour'. For gorgeous landscapes you cannot do better that to shoot at sunrise and for an hour or so after that, or at sunset, and the hour or so before it sets. The light has a luminous quality, shadows are long and show off the contours of the land, which is ideal for a strong mono image. The sky ignites with various hues, and if you catch a sunrise or sunset with an interesting set of cloud formations, then the more texture and detail, the better for black and white. Watch the local weather forecasts for the area you intend to shoot.

8

Sweet light

There is also what is referred to as 'the blue hour'. This is the twilight period you experience at either end of the day when the sun is a fair distance below the horizon, but its influence can be seen in the sky. A 'sweet' light, it can be suggestive of romance, and is treasured by artists. It is ideal for cityscapes where you can capture the city lights against a deep, inky, blue sky. You need to be aware, though, that the window of opportunity is relatively small before either the sun rises and lights the sky, or it sinks and renders the sky black. It usually lasts about 45 minutes after the sun has set, or before it rises.

Landscape photography tips

9

Stable conditions

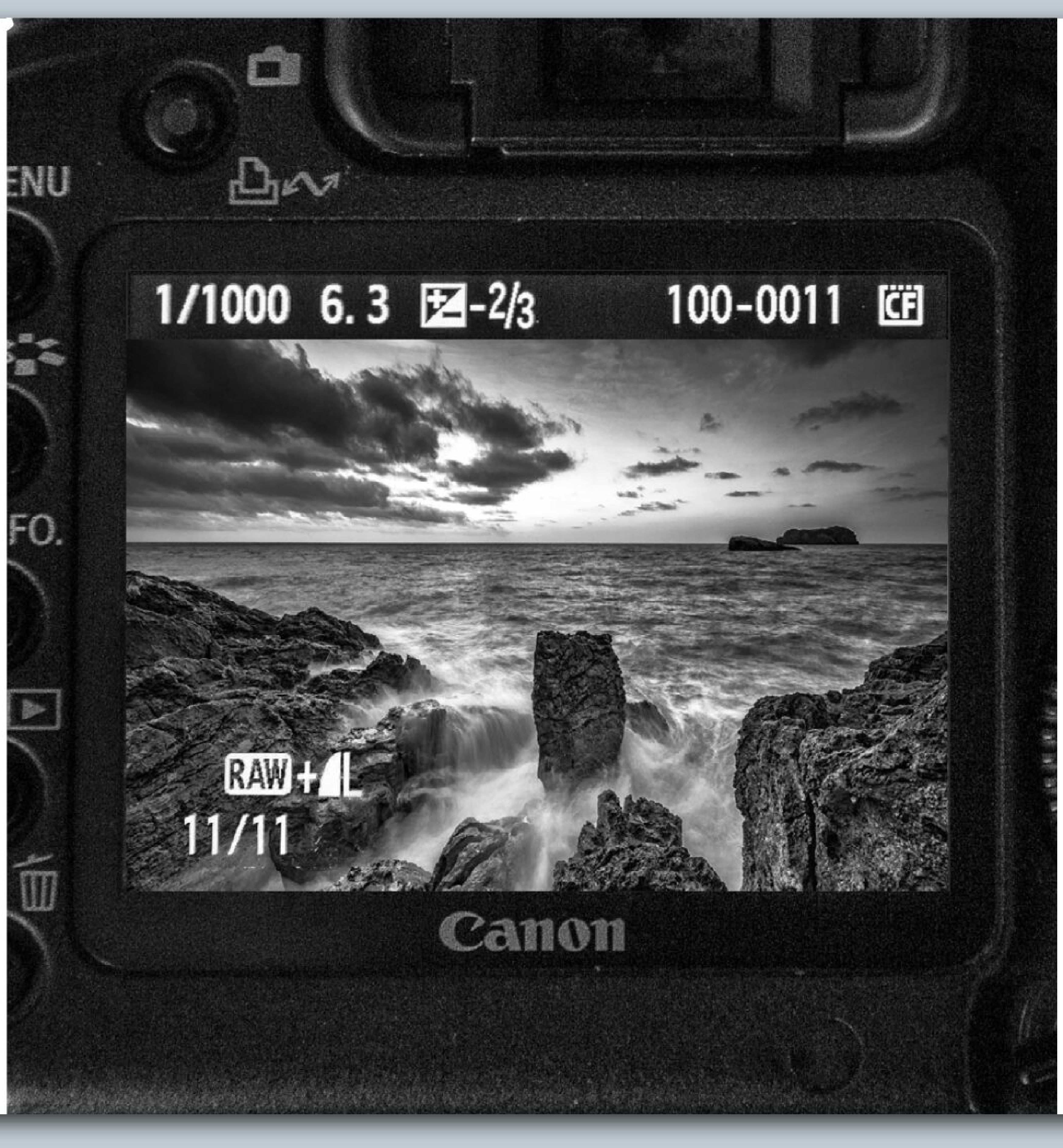
A tripod is a must for landscape work. You may be working in low light conditions and handheld shots are not going to yield sharp images. You might also want longer exposure times to render water soft and misty, or show clouds moving in the shot over a number of seconds for added drama. An effect that works particularly well in black and white. There are plenty of strong, lightweight tripods to choose from that won't be a chore to carry with you on your shoot. Couple a cable release with it and you are taking big steps in reducing any unwanted camera shake and vibration.

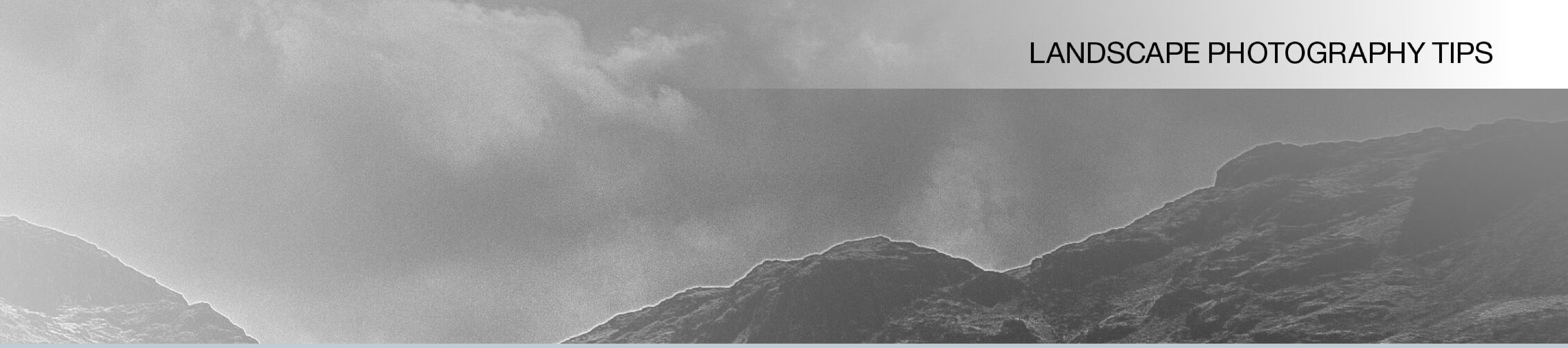
Canon
TC-80N3

10

A golden rule

Try to get out of the habit of shooting jpegs. It can't be stressed enough: if you want the best from your shots, you need to switch to Raw shooting mode. Most modern cameras now allow you to capture your images in Raw format. Raw, as the name suggests, is the uncompressed and unprocessed image data straight from the camera's sensor. The files are much bigger than their jpeg counterpart, but they give much greater latitude when it comes to processing your final image. Details lost in deep shadow in the original shot may be revealed through careful processing; and bright areas of the image where detail is blown out can be recovered. You can also enhance the image's contrast, tonal qualities and exposure.

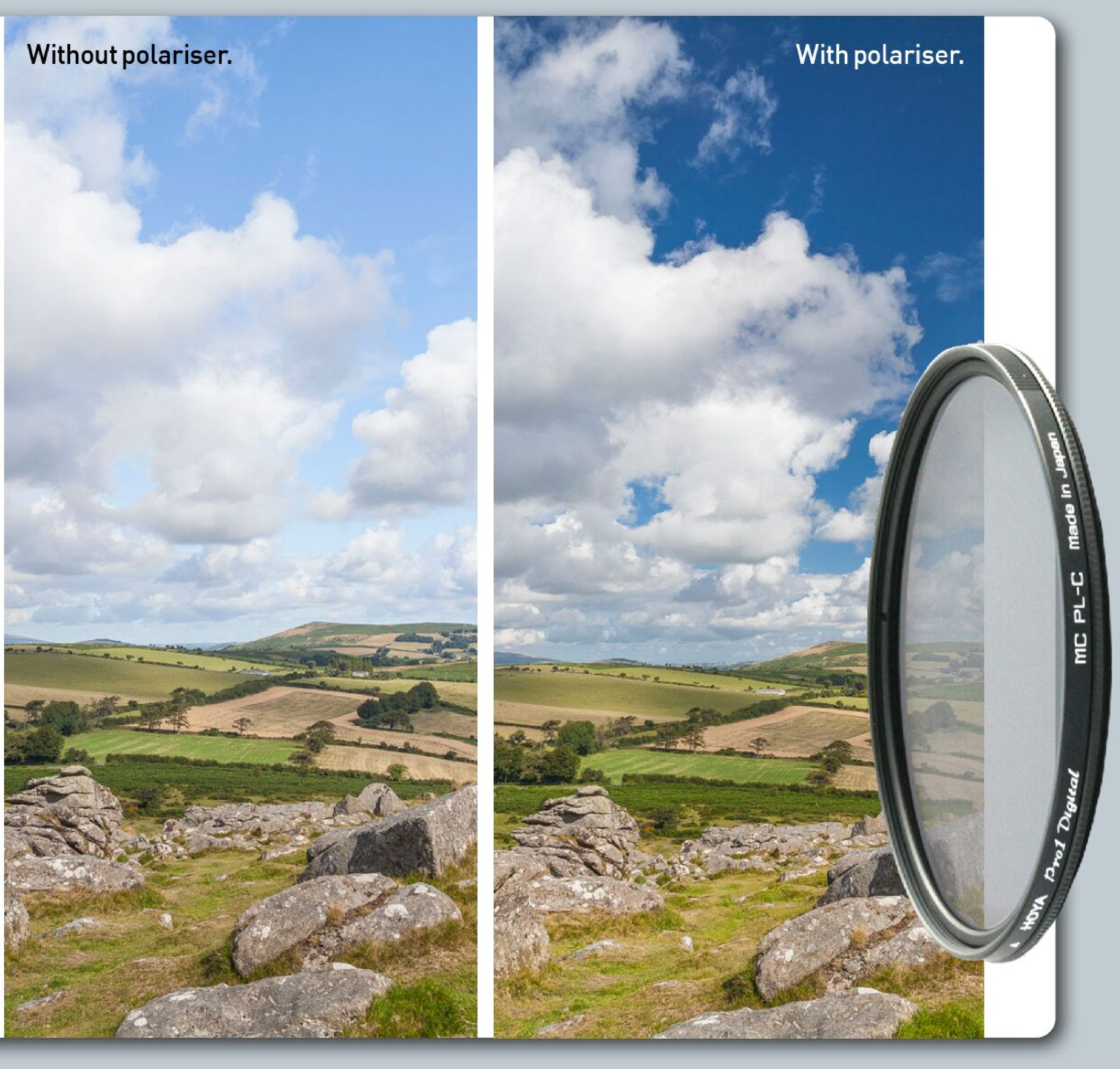




11

Filter systems

Think about investing in some filters. A circular polariser is very useful. It can boost the contrast in blue skies and white clouds which is very useful when converting to mono as you can create gorgeously dark skies with bright white clouds. Just be aware that polarisers work best when the sun is behind you, or at least over each shoulder. If you are serious about your landscape photography, probably the single best one you could purchase is a neutral density graduated filter. If you are shooting a scene where there is a large difference in the tonal values between your land and a bright sky, the ND grad will help stop those skies from burning out. Even the best mono conversion can't recover from that.



Without polariser.

With polariser.

12

Off in the distance

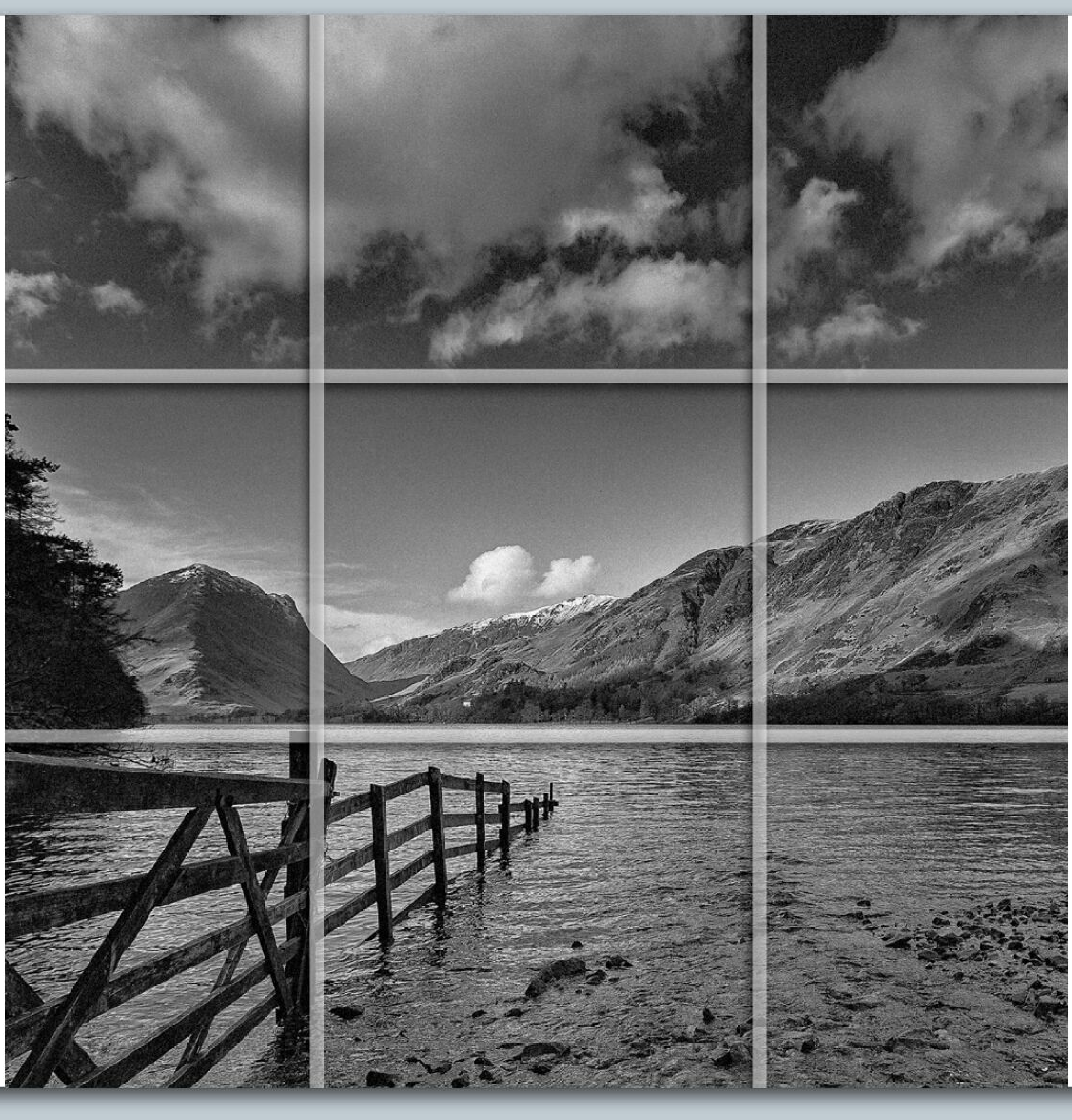
Don't always assume that your landscape has to be shot with the widest lens you have. Sometimes a longer focal length is great for picking out distant details that a wide-angle lens could not. Zoom lenses are also a good choice as they allow you to zoom in and out, allowing you to crop your shots and alter the composition without having to move large distances. Lenses in the 24mm-105mm range are good intermediate wide-angle zooms which give you a lot of framing choices. It is not uncommon to be using zoom lenses in the 70mm-200mm range. Don't forget to shoot in portrait orientation too. Keep experimenting.

Landscape photography tips

13

Framing and composition

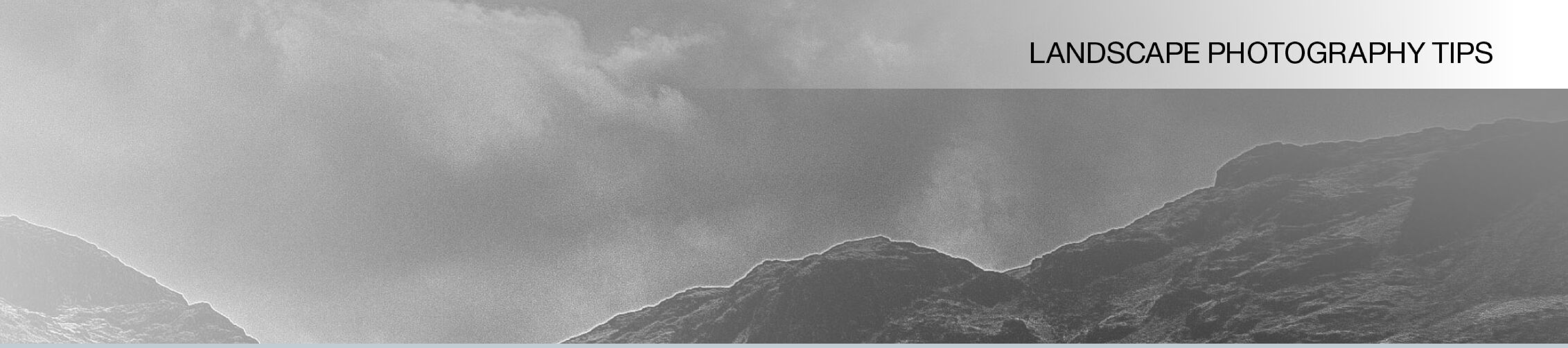
Composition is a very subjective thing. What looks good to your eye may look odd to someone else. If nothing else, keep the 'rule of thirds' as your main compositional tool, along with leading lines to draw you into the shot. Imagine that your frame is split by lines into thirds, both vertically and horizontally. Placing an object of interest at one of the points where these lines would intersect means you are adhering to the rule, and this will help bring balance to your shot. That's not to say you must always shoot by this rule. Rules can be broken, so it's up to you. Don't be afraid to try out different ideas. They may not always work, but have fun trying.



14

Stay sharp

More often than not, many photographers will want their scene to be as sharp as possible from front to back. This ensures that a foreground object like a tree, and a distant object such as a mountain, are both as sharp as possible. This is where depth of field comes into play. At large apertures such as f/2.8, the area of sharp focus in front and behind the point of focus will be relatively small. If you use a much smaller aperture such as f/22, that 'zone' of sharp focus is much greater. As a very rough and general guide, if you focus on a point about one third of the distance into your scene, you are giving yourself the best chance of maximising the depth of field available.



15

Maximum exposure

Consider using longer exposures in your landscape shots. Photographers often employ exposures that last seconds, or even tens of seconds, to show clouds streaking across the sky rather than looking static and puffy. Black and white loves these kinds of shots. The classic is to shoot moving water using long exposures. Waves crashing against a shore with an exposure of one or two seconds show the water as a dynamic and powerful fluid; the same scene shot with a much longer exposure will turn the water to a misty, milky fog. It is safe to say that your tripod is the key to the success of these images.

16

Take control

If you are relatively new to DSLR photography, you may still be using your camera's auto or semi-auto functions where it will decide on the best settings to use in either Shutter Priority or Aperture Priority. In many cases this is fine for general shooting conditions. However, to get the most from your camera, you need to take manual control. Your camera doesn't know the shot you may be trying to achieve. As long as it is in auto, it will keep making decisions for you and you will end up with shots that don't match your expectations. In manual mode, you can decide on how the scene is exposed. Make the creative decisions; don't leave it to your camera.

ISO
A-DEP
M
Av
Tv
P
ON
OFF

17

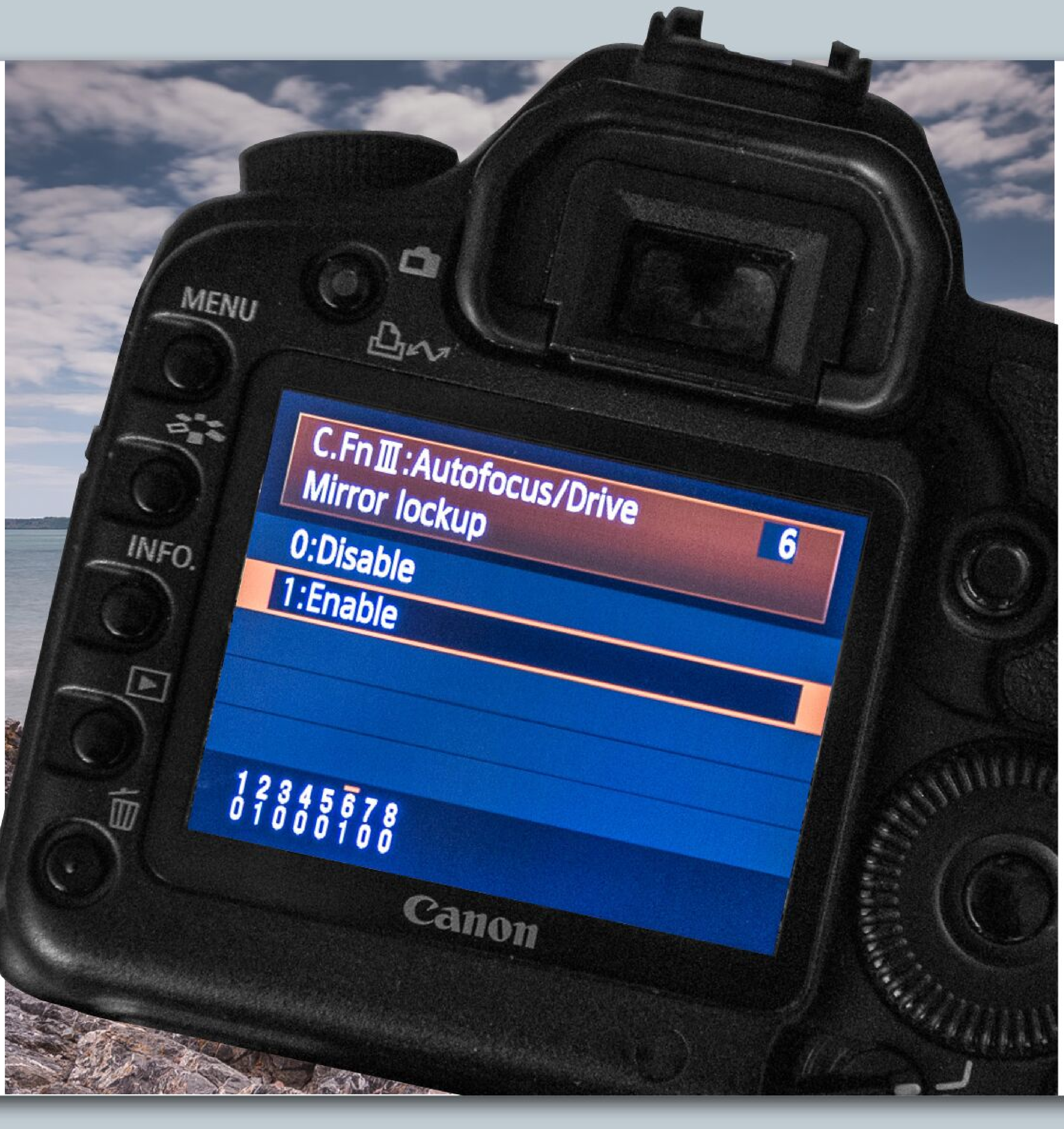
Testing, testing

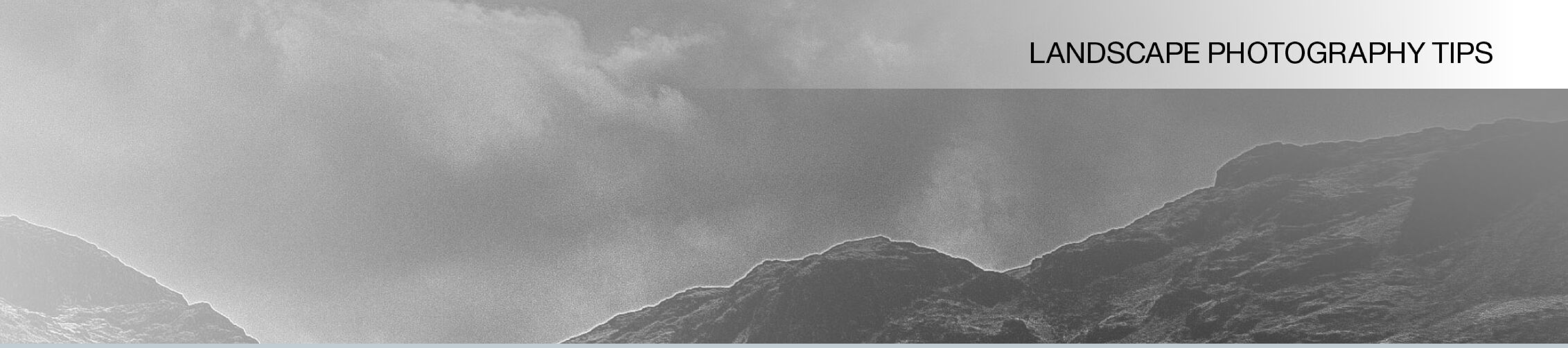
Don't be afraid to shoot a number of test shots handheld. Turning up at a location, sticking your camera straight onto the tripod and shooting at head height may not be the most ideal viewing angle. Try shooting a number of frames where you experiment with different angles: high viewpoints; low to the ground; portrait and landscape orientations. Try out different compositions and framing. Are there any foreground distractions where you are? Is there an interesting feature elsewhere that will enhance the shot? Remember to try and think in black and white. Sometimes the simplest composition, which looks wrong in colour, is suddenly transformed when seen in black and white.

18

Lock it up

When you are set up and ready to take your shots, consider the stability of your tripod. Even the sturdiest tripods can move in the wind or if the ground is slightly soft. In addition, even the movement of your camera's mirror flipping up and down with each shot can create vibrations that affect a shot's sharpness. If you set your camera for mirror lock-up, it will flip the mirror out of the way long before the shutter opens to take the shot, giving time for any vibrations to cease. Couple this with a cable release or a remote trigger to fire the camera without you needing to touch it, then you have increased your chances of removing unwanted camera shake.

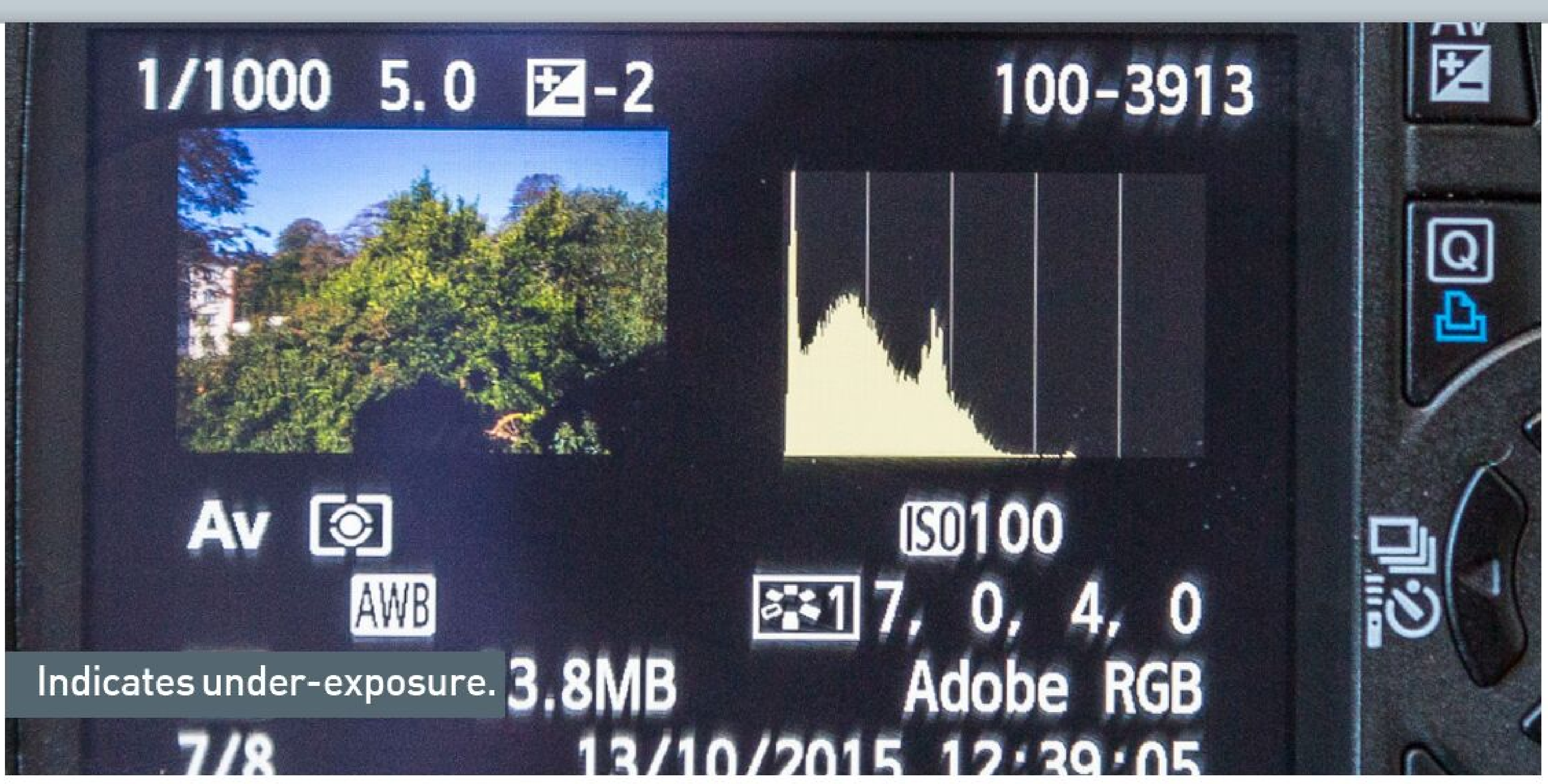




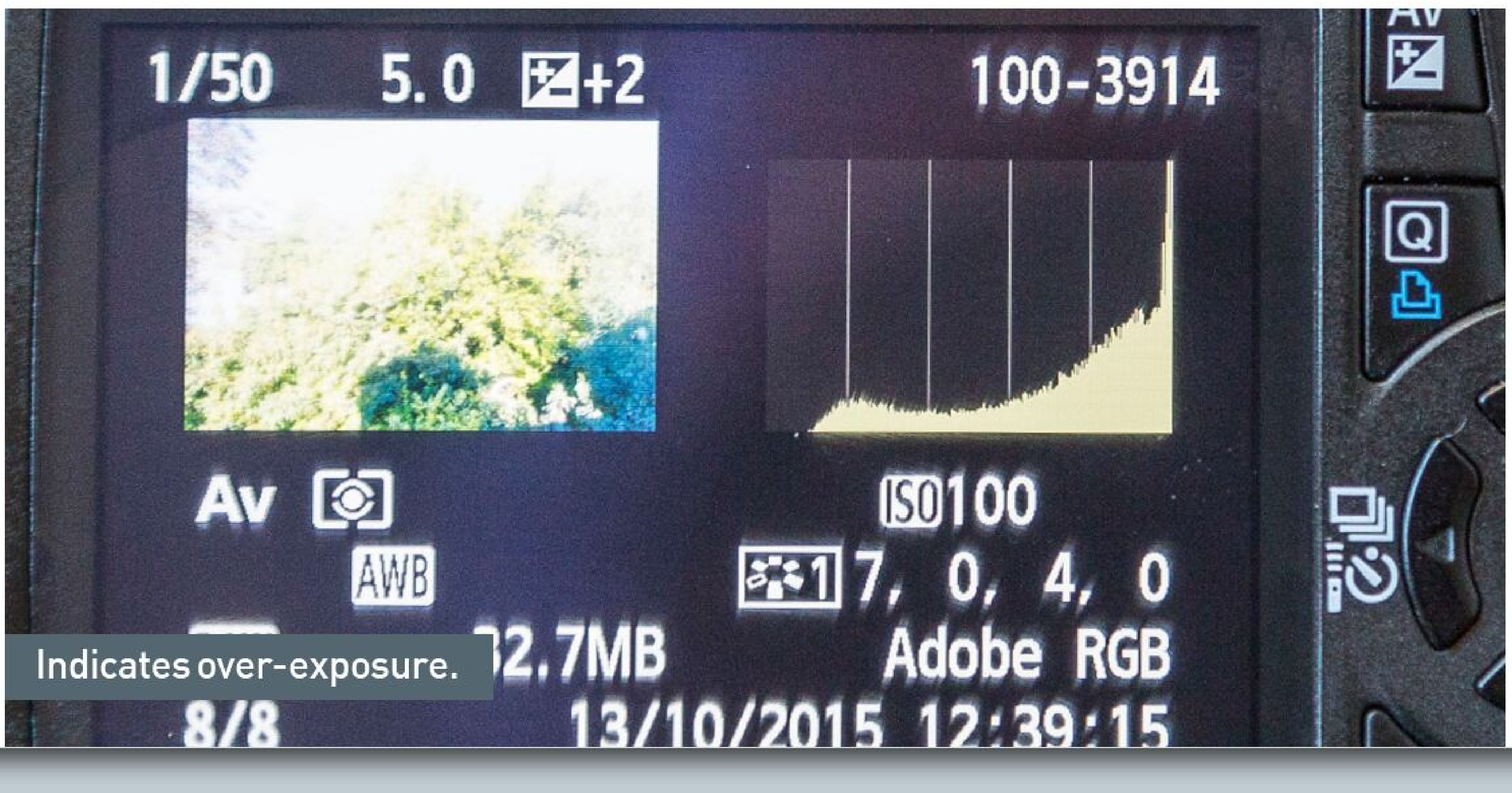
19

Don't fear the histogram

Most DSLR's and a lot of the more advanced compact cameras have the option to display a histogram of the images you capture. A histogram is a graphic representation of the tonal values in your shot and how they are distributed. If the graph is bunched at the far left, then your shot is very underexposed and you risk the loss of a lot of detail to shadow areas. If it is sliding off the right hand side, then it will be overexposed and detail will be lost in the highlight areas. The more dynamic range you can capture in colour, the more scope you have when you come to do your conversion to black and white.



Indicates under-exposure.



Indicates over-exposure.

20

And finally...

Always review your shots after you take them. It can be very disheartening to take what you think is a wonderful shot, only to get home, process the shot and see that it is out of focus or badly framed. Use your cameras LCD screen to zoom into your shots and check them for sharpness and detail, and confirm the composition is looking how you imagined. If you're luck enough to have a small laptop or tablet with you, download them and review on those. Bear in mind that not all cameras show you 100% of the frame in the optical or electronic viewfinder, so reviewing images on the LCD or on-screen is important.

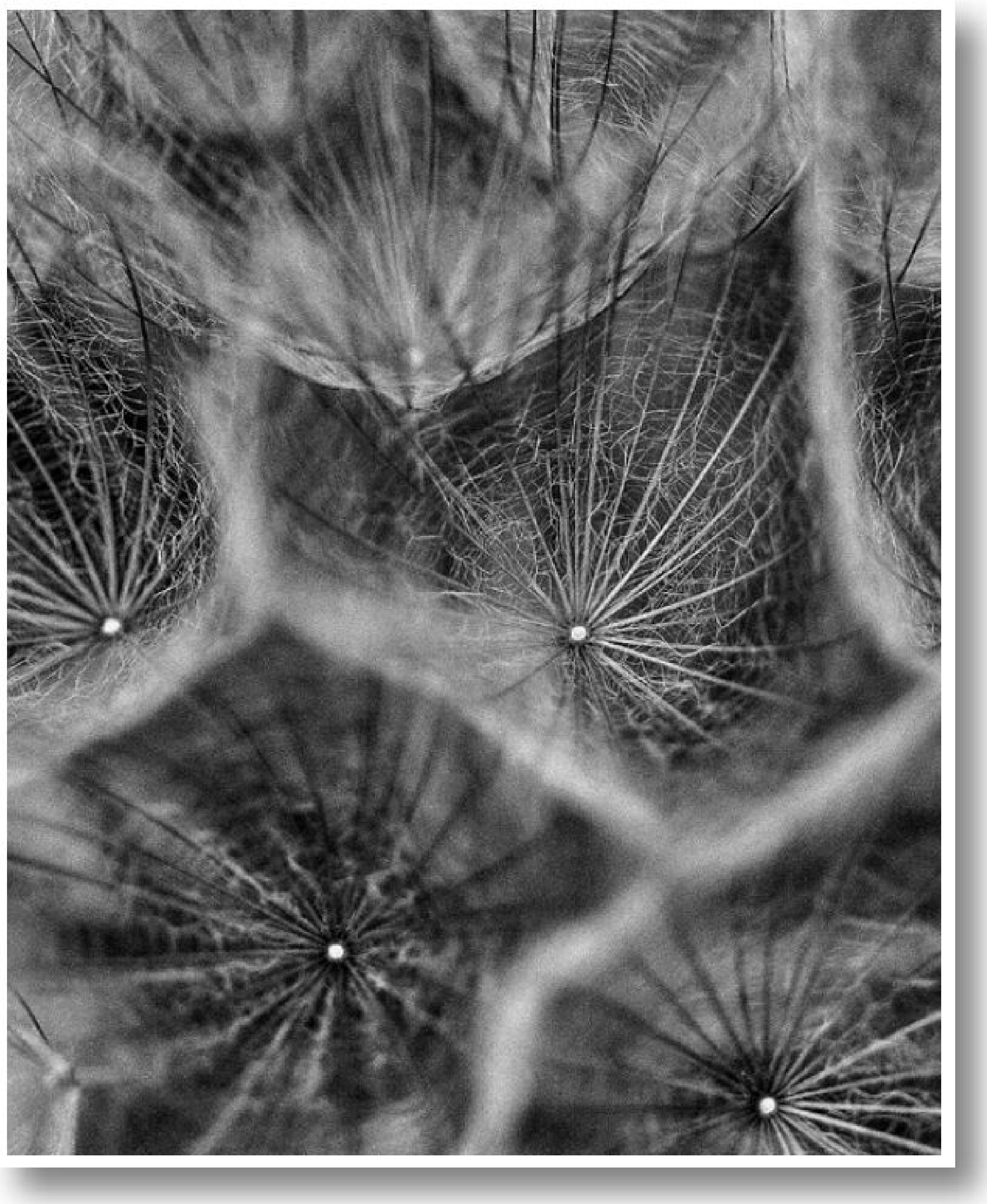
> **"Like all true art it's hard to define, and equally hard to master."**

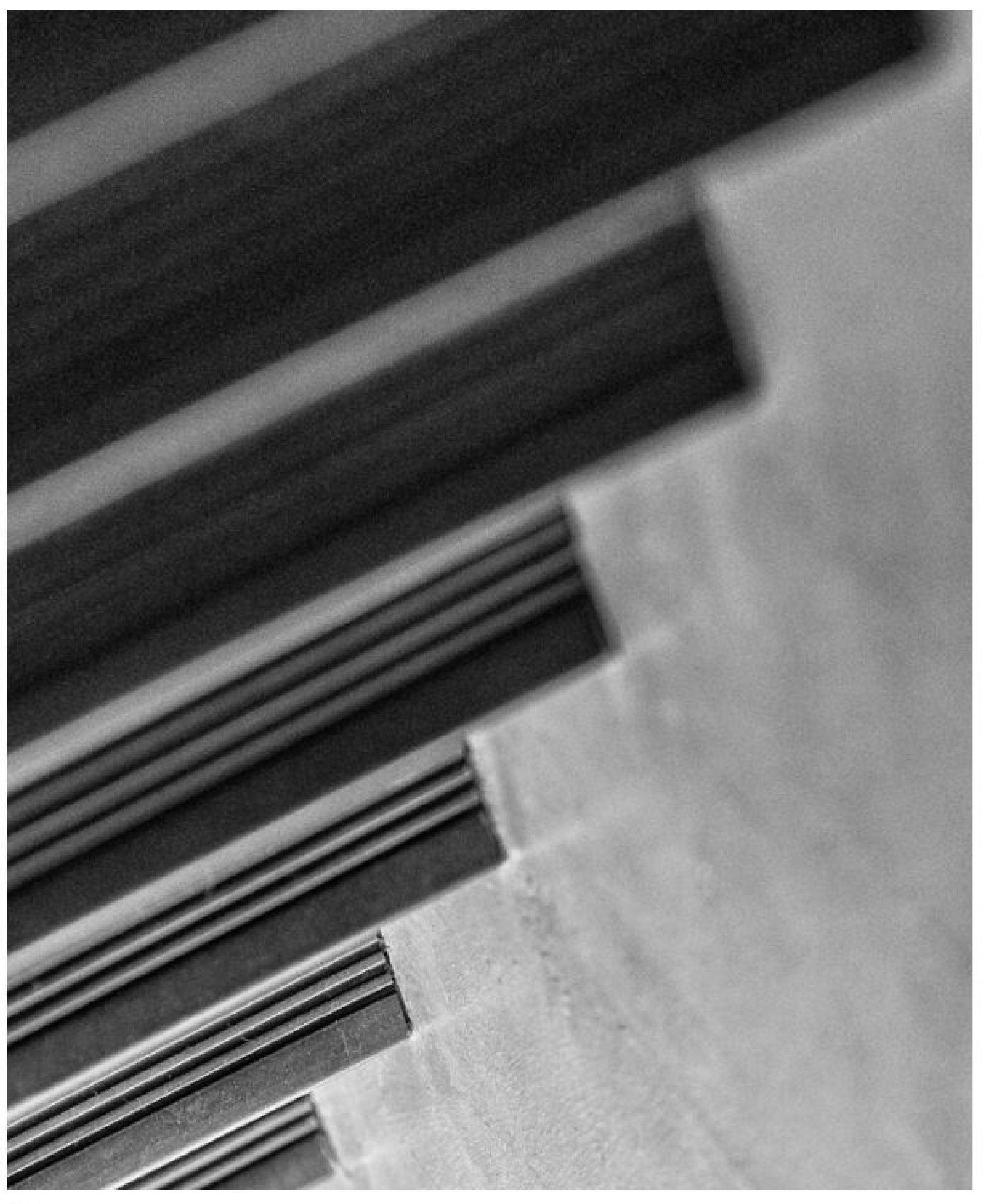
ABSTRACT BLACK AND WHITE PHOTOGRAPHY

AN INTRODUCTION TO THE TECHNIQUES OF ABSTRACT ART AND PHOTOGRAPHY

Abstract photography is the representation of scenes and objects in a manner that divorces them from their context and creates a pure artistic image. Like all true art it's hard to define, and equally hard to master.

We have already made a lot of reference to shape, form and the absence of colour in this black and white special. When it comes to abstract images it is even more relevant. Remove colour from an abstract image and you take away another visual clue by which you could possibly identify it. You are left only with shape, tone, form, pattern and texture. This is a positive boon to the abstract photographer because that is exactly what you are after. We can explore the possibilities of the nature of black and white photographic abstraction over the next few pages. ■





> “...it is possible to create photographs that stand on their own as works of art without the burden of context.”

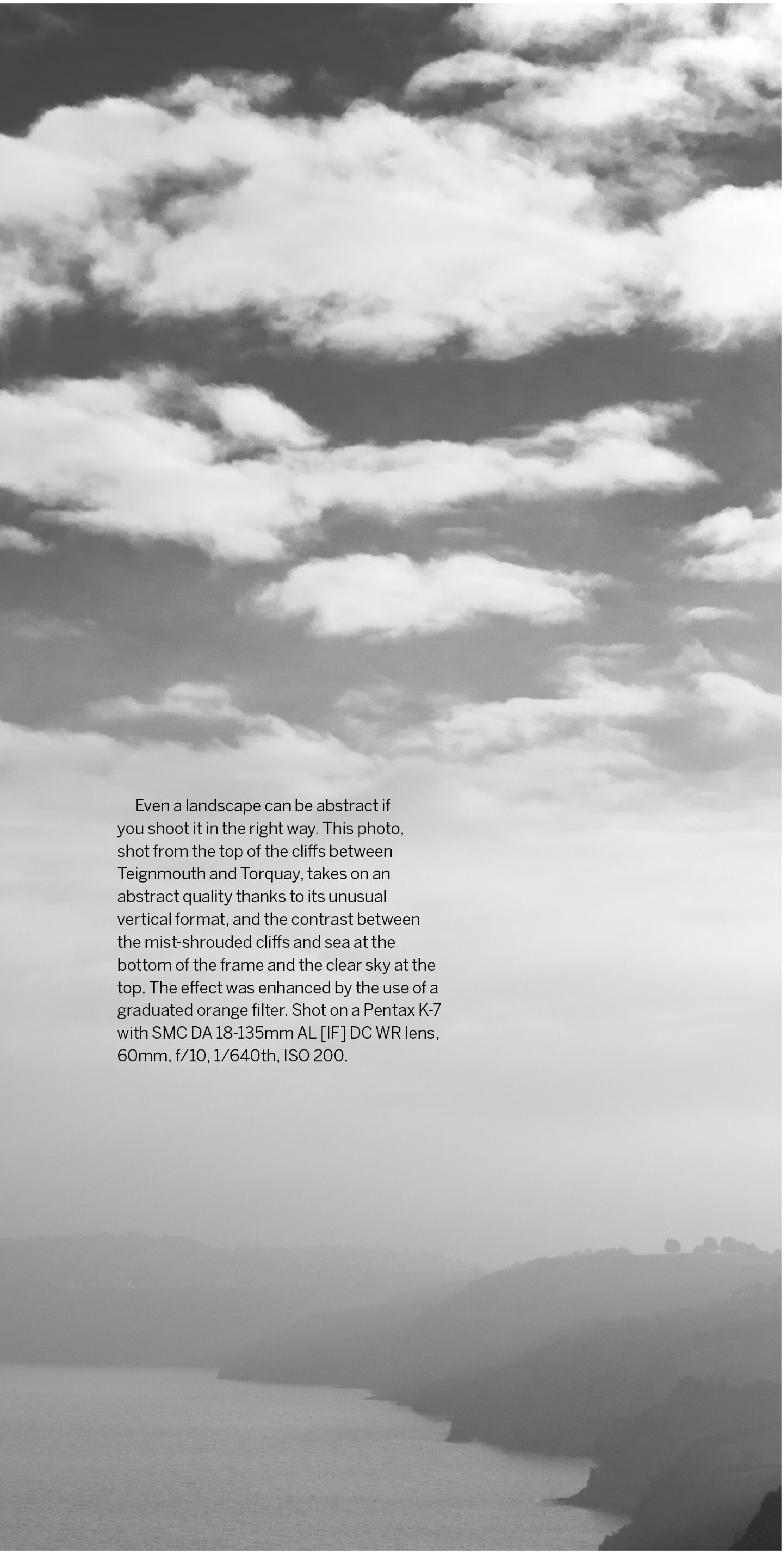
Introduction to abstract photography

WHAT EXACTLY IS ABSTRACT PHOTOGRAPHY? IT DEPENDS WHO YOU ASK

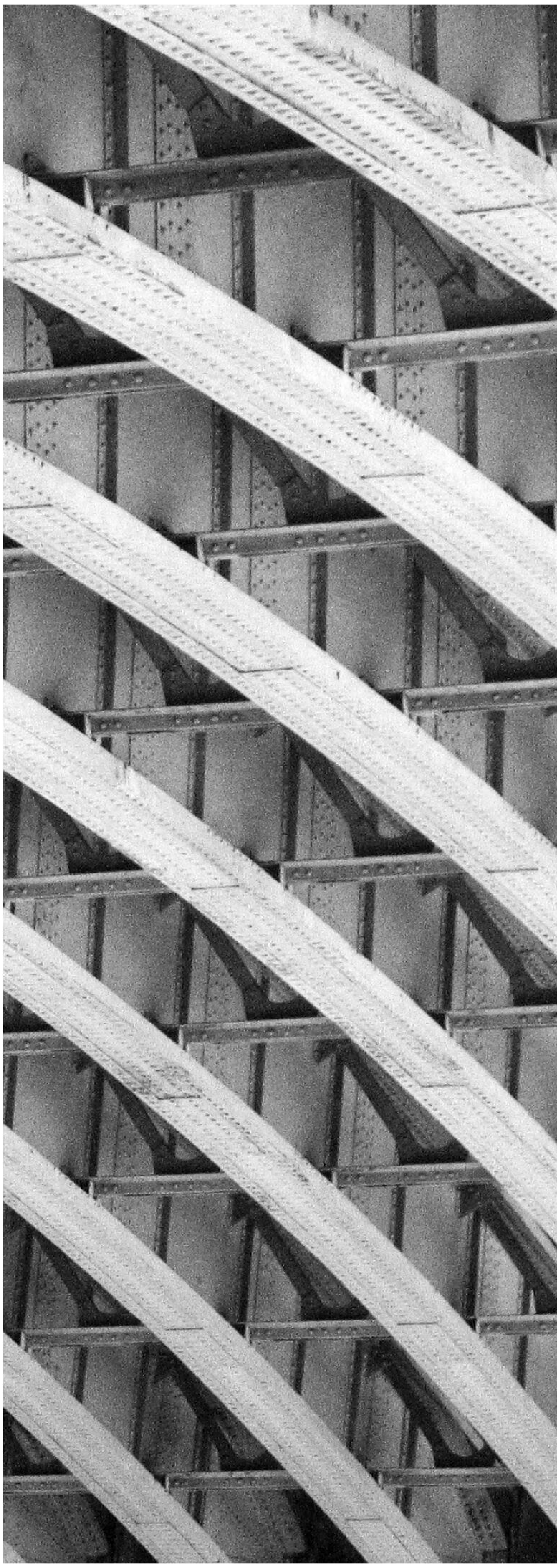
The techniques of black and white photography are well suited to abstract art. The world seen without colour is already one step removed from the everyday perceived reality. Adding techniques such as selective focus, narrow depth of field, extreme contrast; and by paying attention to composition, contrast and lighting; it is possible to create photographs that stand on their own as works of art without the burden of context.

An everyday object or scene, when photographed in a particular way, can take on an unreal appearance, elevating them above the mundane. Something as simple as a supermarket trolley, the branch of a tree or the smoke from a cigarette, shot in isolation, with particular lighting or from an unusual angle, can take on a new meaning or no meaning at all.

The preceding paragraph might have sounded a bit pretentious, and for that we apologise, but defining exactly what is and isn't abstract photography is very difficult. Depending on whom you ask, any photograph that represents a recognisable object can't possibly be abstract; but Man Ray photographed a curly lampshade in sunlight and that's widely regarded as a prime example of abstract photography. Over the next few pages we'll show you some black and white images that fall into this broad category and offer a few tips on how they were achieved and what they mean to us. ■



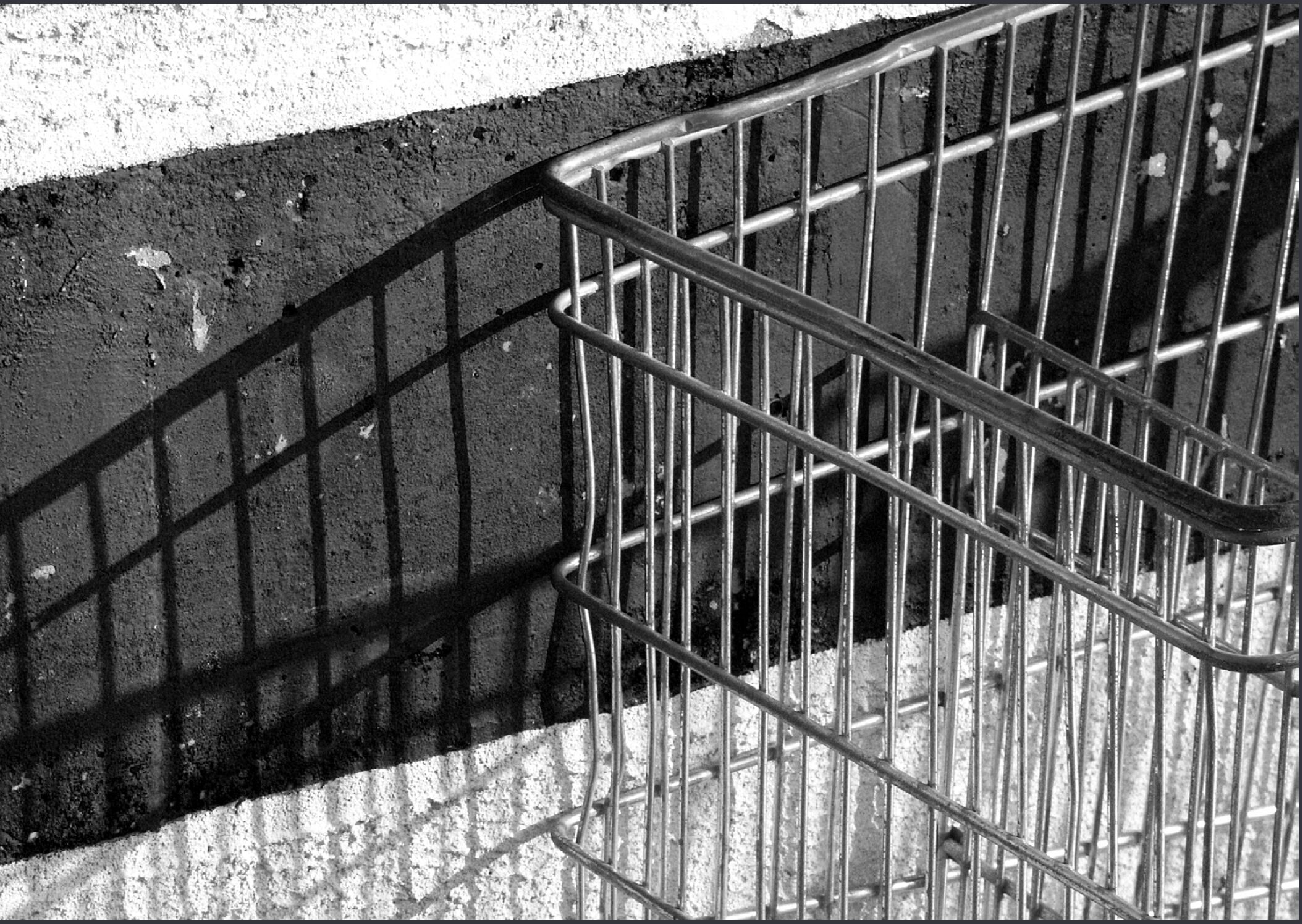
Even a landscape can be abstract if you shoot it in the right way. This photo, shot from the top of the cliffs between Teignmouth and Torquay, takes on an abstract quality thanks to its unusual vertical format, and the contrast between the mist-shrouded cliffs and sea at the bottom of the frame and the clear sky at the top. The effect was enhanced by the use of a graduated orange filter. Shot on a Pentax K-7 with SMC DA 18-135mm AL [IF] DC WR lens, 60mm, f/10, 1/640th, ISO 200.



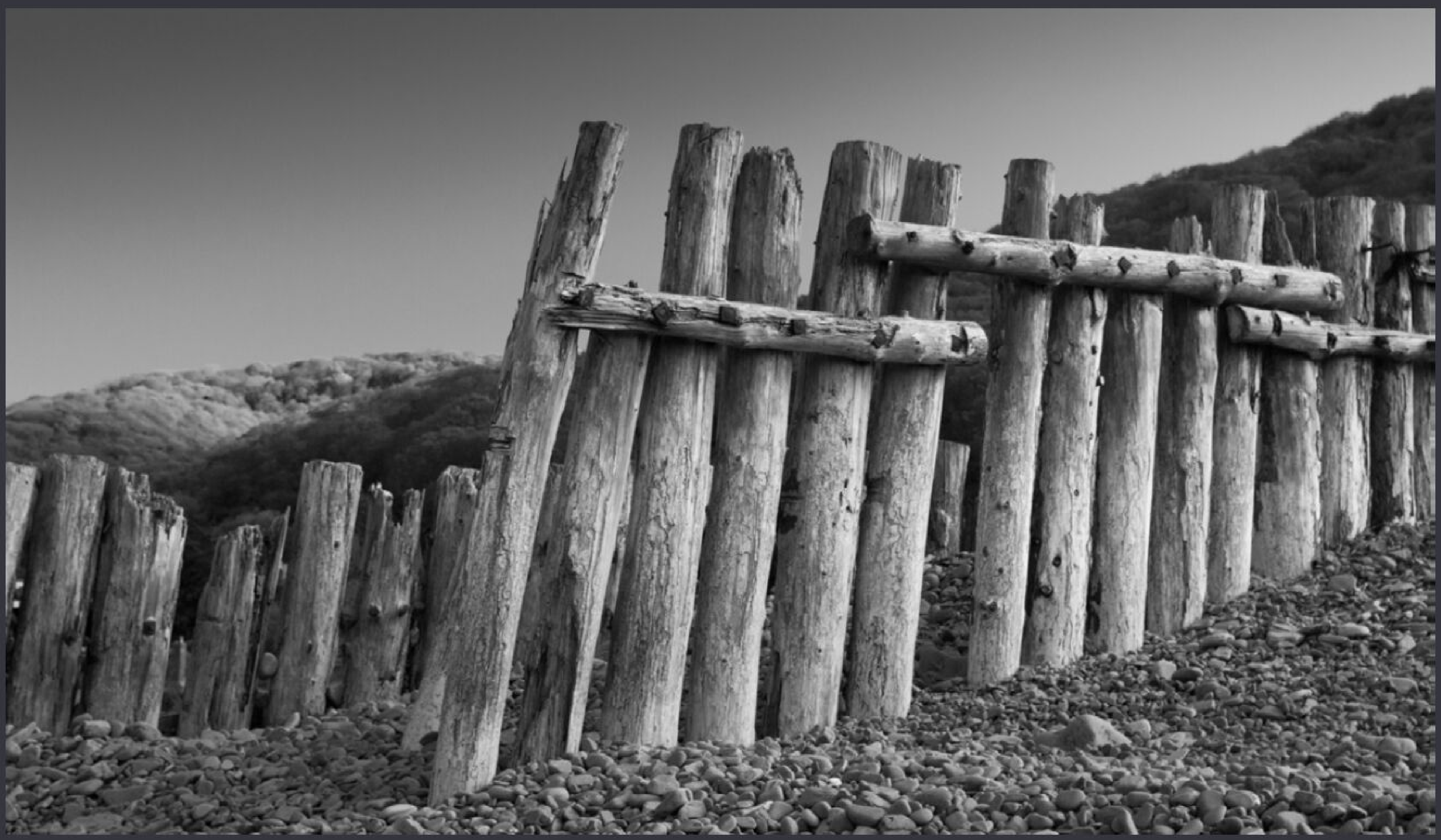
You don't need a big fancy DSLR to shoot abstract images. This hypnotic geometrical pattern is the roof of Paddington station, shot using a Canon Ixus 500 compact camera, which has a simple 3x zoom lens. To isolate the shape of the roof girders from their surroundings and emphasise the abstract nature of their geometrical pattern, the lens was set to its maximum zoom, and the camera mounted on a Gorillapod flexible tripod fixed to a handrail of the footbridge at the end of the platform. The colour JPEG image was converted to monochrome using Photoshop's black and white adjustment filter. 22.2mm, f/4.9, 1/160th, ISO 400.

Abstract photography

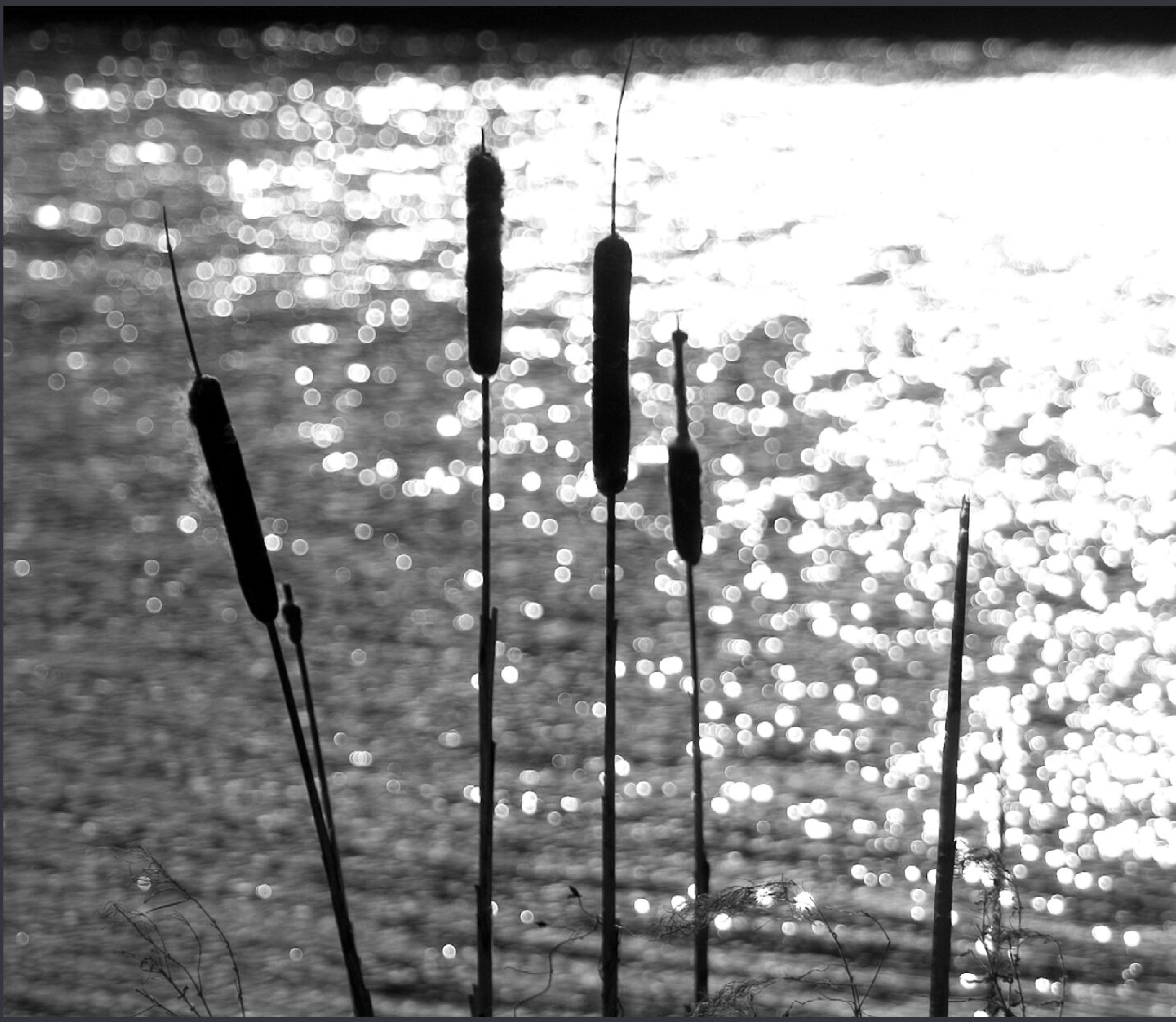
You can find abstract images in the most commonplace locations; in fact it's a useful educational exercise to go to a place you wouldn't think of as a photographic location and see if you can shoot at least three good photos there. This shot of a battered shopping trolley casting a stark shadow on a concrete wall was taken in a supermarket car park in Bournemouth. The contrasting textures and strong lines make a striking composition; and by zooming in and isolating just a small part of the subject, those qualities are emphasised. The photo definitely has a distinct mood despite its humble origins. It was shot in raw mode on a Minolta Dimage 7Hi at close range and nearly maximum zoom, and converted to monochrome in Adobe Camera Raw. 43.4mm (171mm equiv.), f/8, 1/180th, ISO 100.



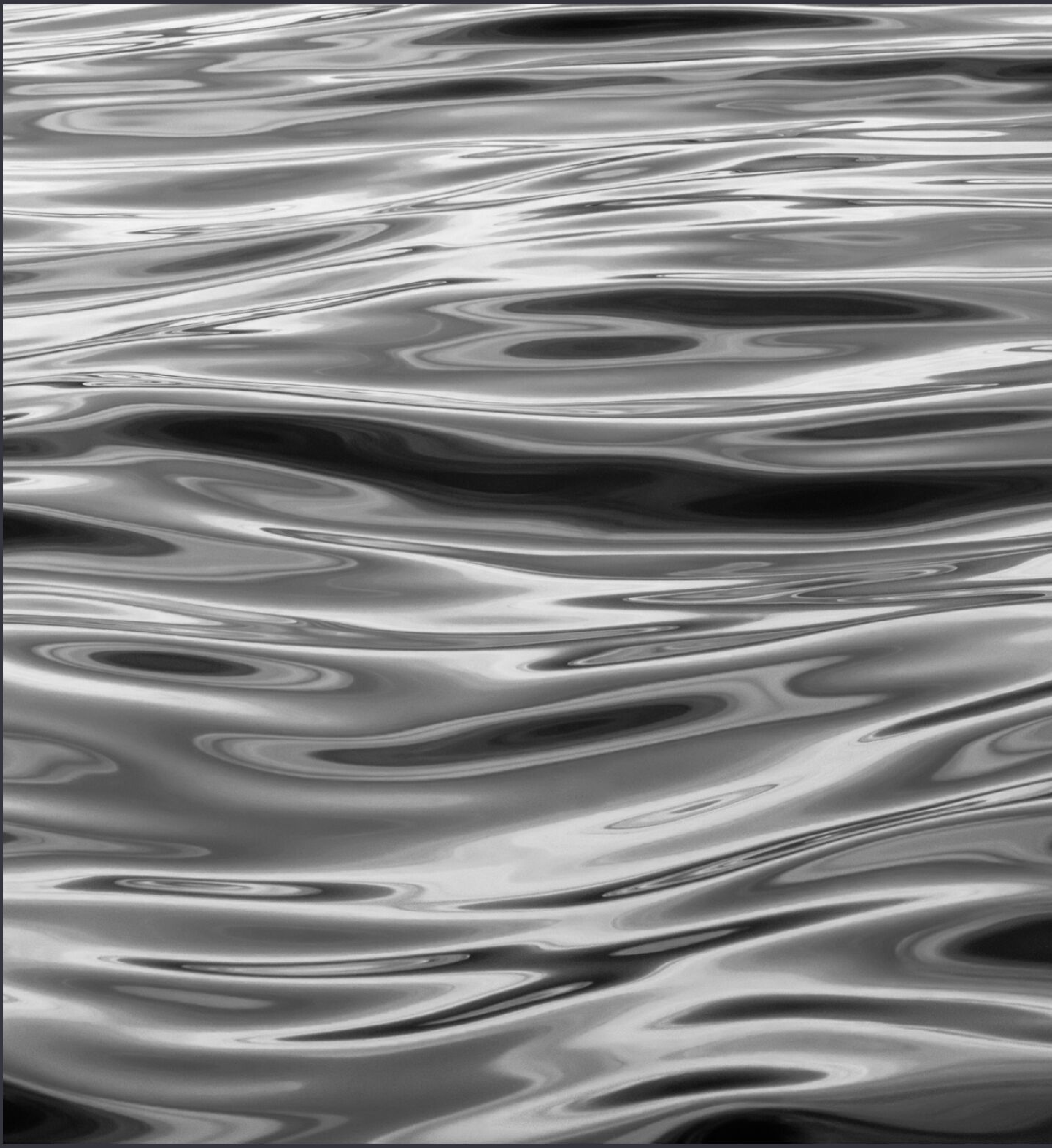
Of course you don't have to restrict yourself to urban locations to find interesting abstract patterns. These decaying groynes (wavebreaks) can be found on the usually deserted stony beach near Porlock in North Devon. Although not strictly speaking an entirely abstract image, the multiple textures, and the contrast between the regular patterns of the wooden structure and the chaotic jumble of the stones on the beach, make a striking and atmospheric image. It was shot in raw mode on a Pentax K-7 DSLR with an 18-55mm f/3.5-5.6 kit lens, and converted to monochrome in Adobe Camera Raw, with the addition of a -1EV graduated filter to darken the sky. 35mm (52mm equiv.), f/5.6, 1/125th, ISO 200.



Nature is a great source of abstract images; any walk in the country can provide you with endless inspiration. In this riverside shot the bright sunlight reflecting on the water throws the reeds into silhouette, creating a simple but strikingly beautiful image. By focusing on the reeds and using a wide aperture and long focal length to restrict depth of field, the bokeh of the water reflections are blurred, isolating the silhouette of the reeds against the background. It was shot on the River Wye in Surrey using a Pentax *ist D camera with a Pentax-DA 55-300mm f4/5.8 ED lens. Shot in black and white in-camera. f/4.5, 1/4000th, ISO 200.

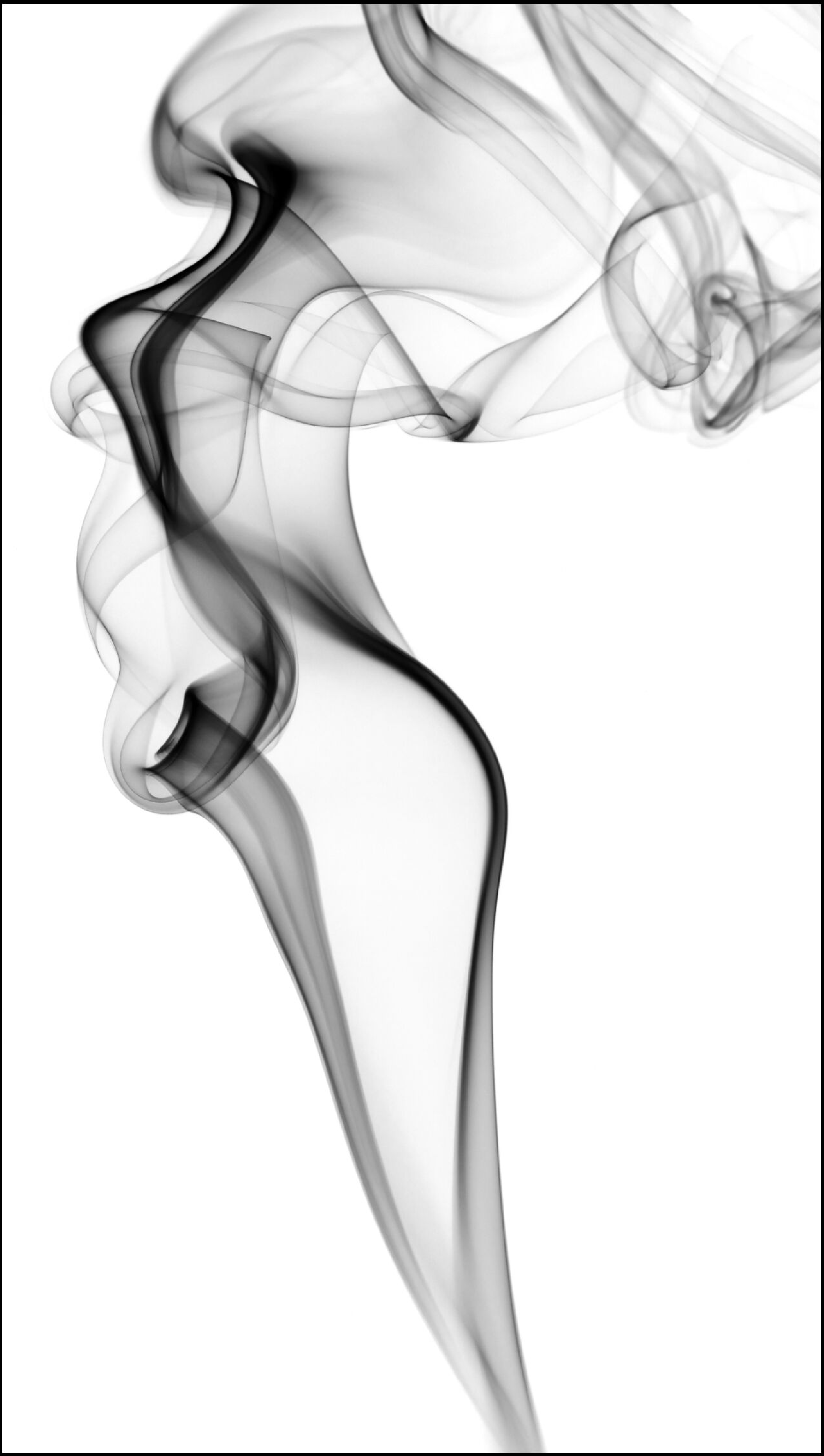


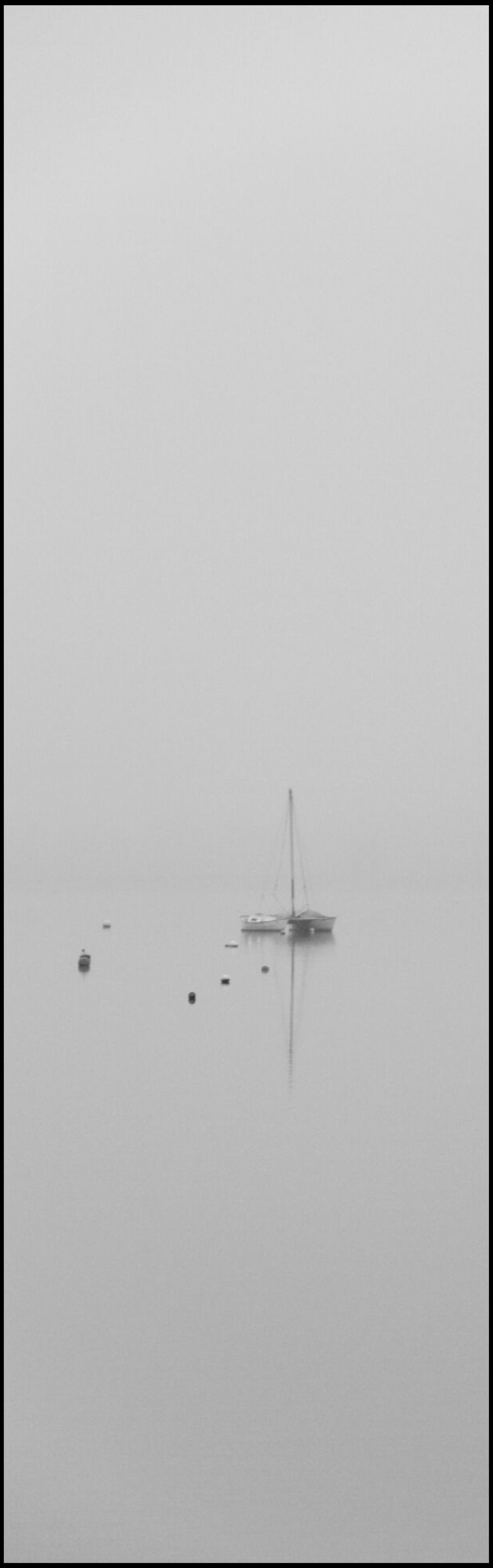
Continuing the theme of reflections in water, this one is more of a pure abstract image. Shot from a boat on the River Exe estuary, it is simply the reflections in the water, given form and texture by the slight swell. Shot in colour but converted to monochrome in Photoshop, with slightly boosted contrast and a red filter, it gives the water an almost oily look, while enhancing the abstract patterns of light and dark. It's a simple shot that anyone could take. Shot on a Pentax K-3 with a SMC DA 18-135mm AL [IF] DC WR lens, f/16, 1,400th, ISO 100.



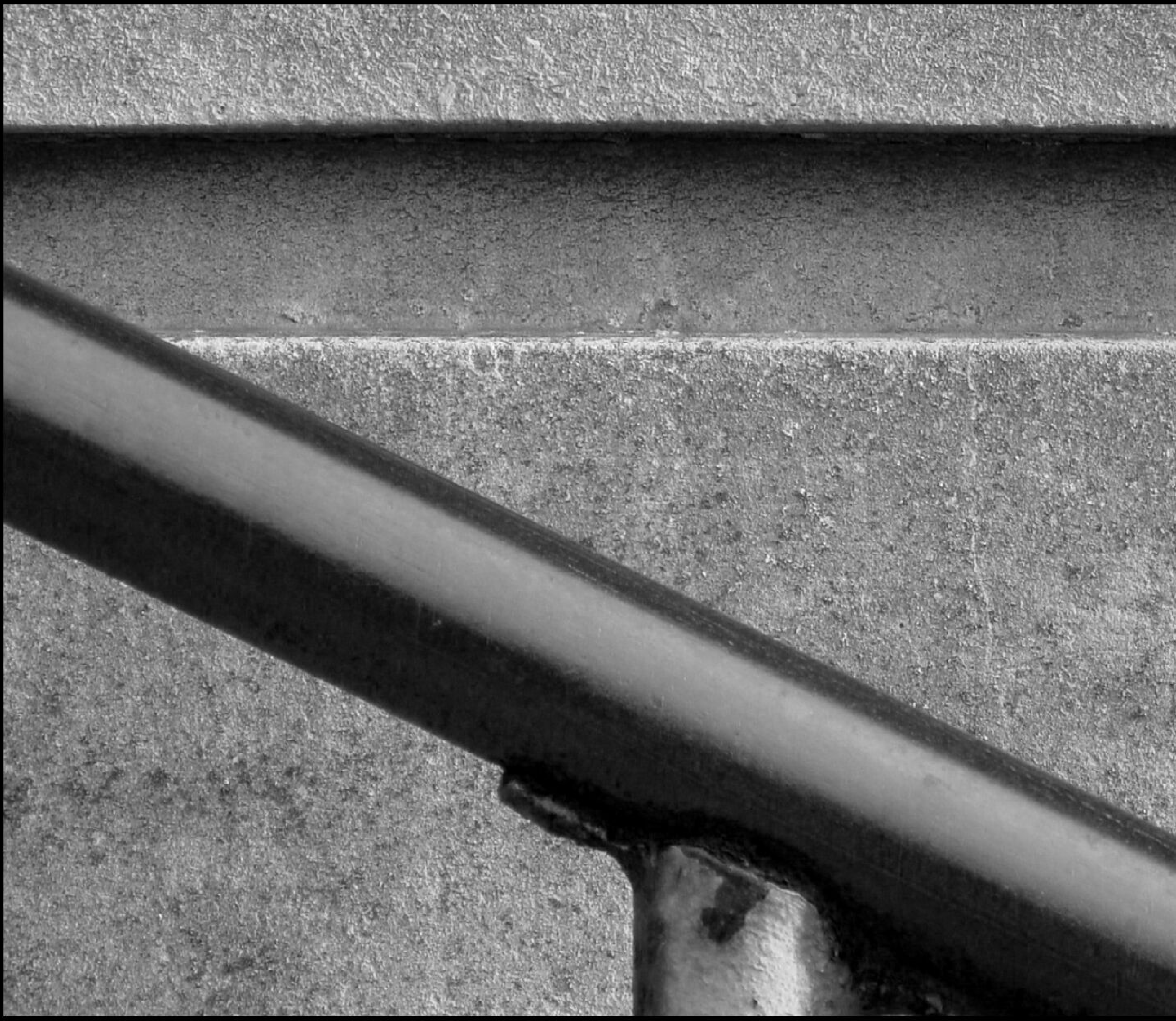
Abstract photography

This purely abstract photograph is surprisingly easy to shoot. It's simply the smoke from a cigarette – although an incense stick would work just as well – shot against a black background. It's lit from the side using an off-camera flashgun, shaded so that none of the light falls on the background. You'll probably need to take a few dozen shots to get one that looks good, so trial and error is the key. Once you've got a shot you like, simply convert to monochrome in Photoshop, and then use Image > Adjustments > Invert to turn it from white on black to black on white. Shot on a Pentax K-3 with a SMC DA 18-135mm AL [IF] DC WR lens, f/11, 1/160th, ISO 100.

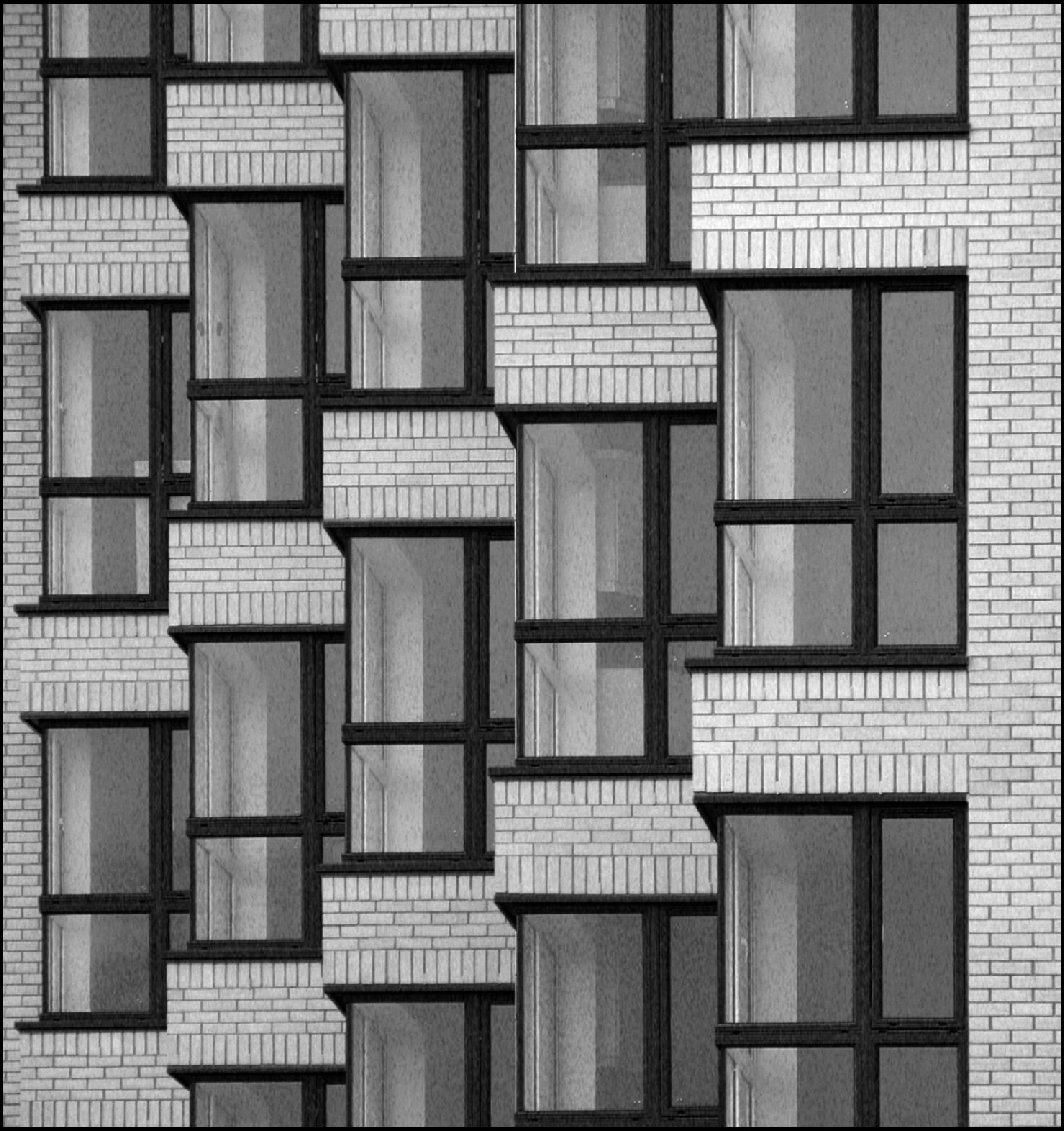




This atmospheric shot looks at first glance like a few abstract shapes on a light grey background, but a second look reveals moored sailing boats shrouded in mist, proof that even a dull and misty day can produce some good pictures. The vertical format emphasises the stillness and quiet isolation of the scene, with the exposure carefully measured so that the far shoreline is just visible as a slightly darker grey line. It was tempting to boost the contrast to increase the tonal range, but doing so would spoil the atmosphere of the shot. Taken on a Pentax K-3 with a SMC DA 18-135mm AL [IF] DC WR lens, f/8, 1/160th, ISO 200.



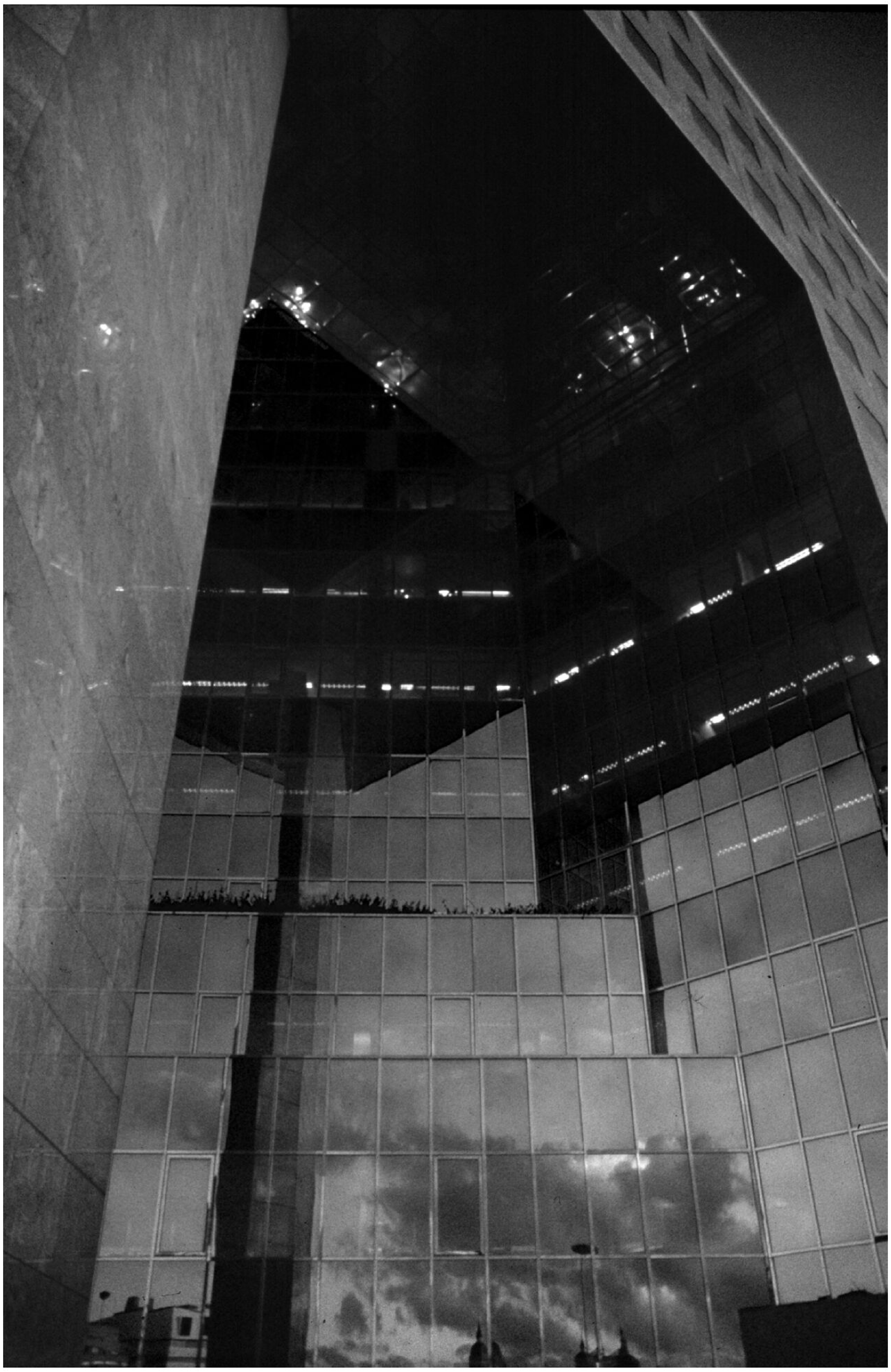
Architectural features can be a great source of abstract images, particularly when you isolate specific details. This shot is a good example; a worn and rusted metal handrail provides a contrast in both texture and shape to the rough concrete of the wall behind it. By using a short telephoto lens at close range to isolate the detail, and a narrow aperture to maximise depth of field, both the rail and the wall are in sharp focus, while the bright overhead sunlight ensures that the texture of the concrete stands out. Careful cropping has improved the simple rule-of-thirds composition. Shot on a Pentax *ist D with a Pentax-DA 55-300mm f4/5.8 ED lens. f/16, 1/125th, ISO 400.

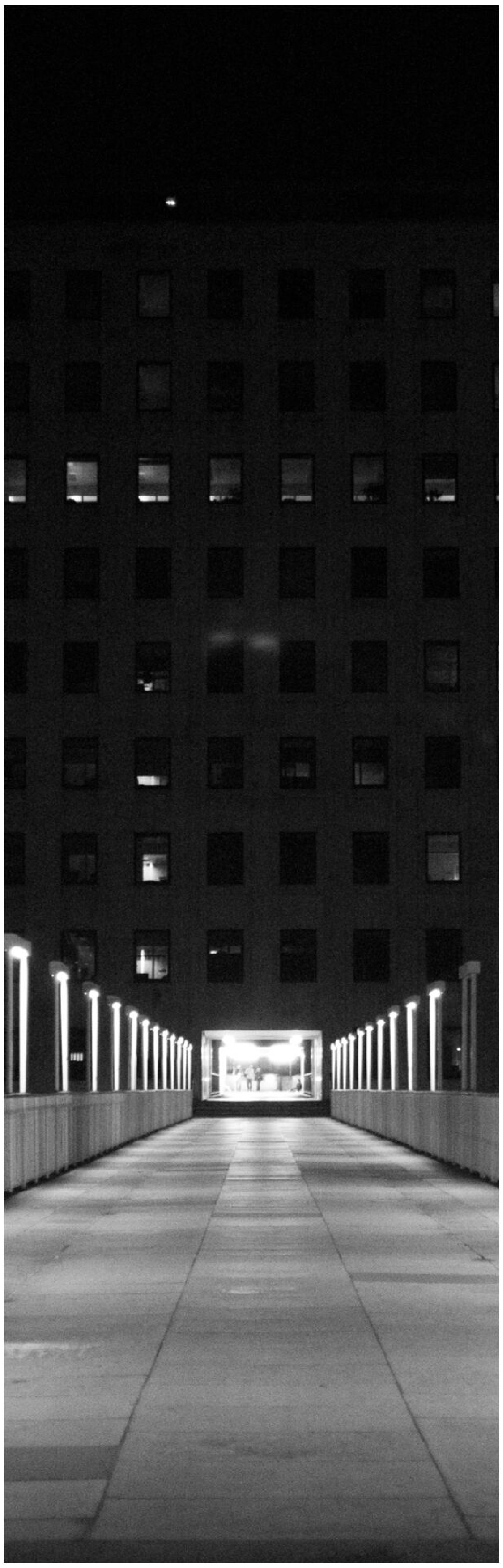


Many architects have been influenced by abstract artists, particularly by the famous grid-based paintings of Piet Mondrian (1872-1944). This is particularly true of modern buildings in large cities, such as this apartment block in London's docklands. By using a long telephoto lens to isolate just a few details of the structure, the abstract Mondrian-like pattern of the window frames is emphasised. This is another example of a good photo from a fairly humble camera, in this case a Nikon Coolpix 5700 super-zoom at an equivalent focal length of nearly 300mm. The colour JPEG image has been converted to monochrome in Photoshop, and the contrast boosted to further emphasise the pattern. f/4.7, 1/180th, ISO 100.

Abstract photography

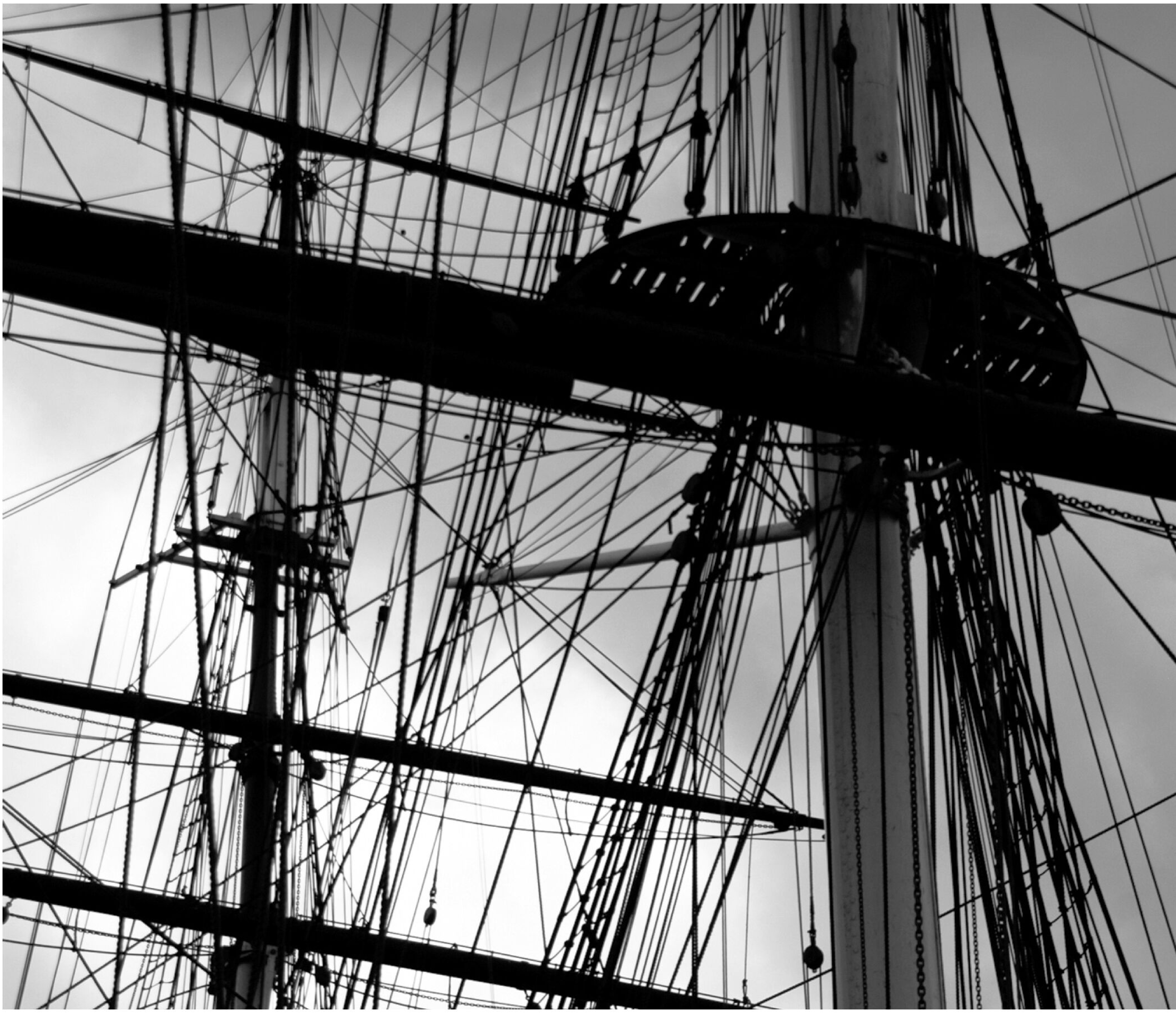
Another architectural abstract, but this time it's the unusual viewpoint and the wide-angle lens that distort reality to create a striking image. It's a well-known central London landmark, 1 London Bridge Court, a distinctive office building on the south side of London Bridge, as seen from the footpath beside the river. The shot was taken in the early evening, just as the office lights were coming on, so it shows the sky reflected in the windows, together with the lights both seen through the glass and reflected in the mirrored panels on the underside of the cut-away area. It was shot on colour transparency film on a Pentax ME Super with a Tokina 28-70mm zoom lens, digitised in a slide scanner and then edited in Photoshop to produce the finished image.

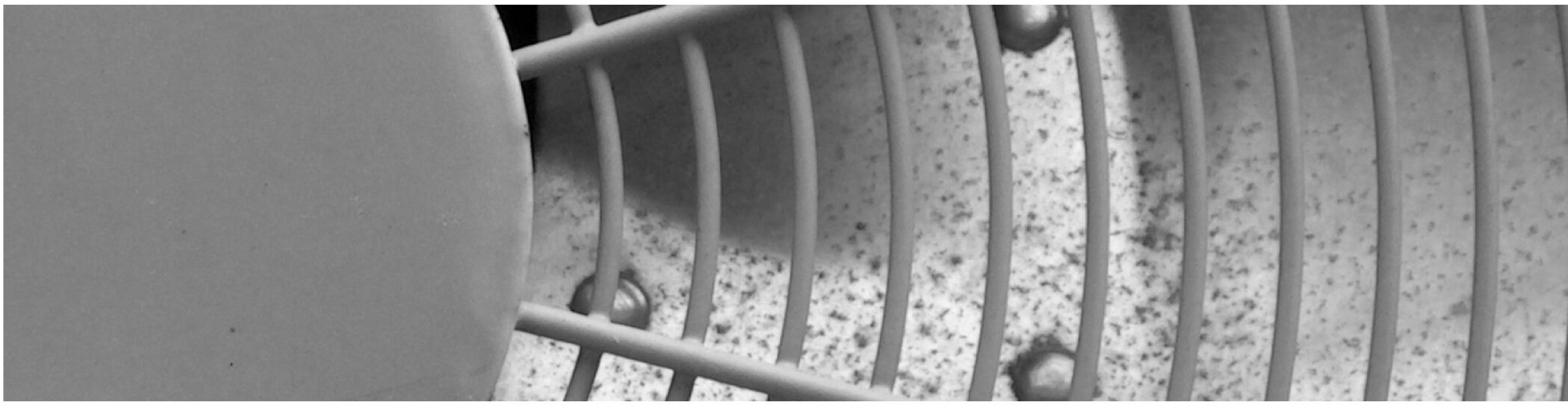




Many large buildings lend themselves well to an artistic photographic interpretation. This is the famous Shell Centre, once described as "the ugliest building in London", but now regarded as a major landmark, and serves as the backdrop to the London Eye. This night-time shot from the walkway connecting the lower floors to Waterloo station emphasises the looming presence of the huge building, with the camera carefully positioned to give a symmetrical view. The exposure was carefully adjusted to ensure that only the windows are visible, hiding the outline of the building. Shot on a Pentax *ist D with a 28-105mm f3.2-4.5 lens at 34mm (50mm equiv), f/3.5, 1/15th, ISO 3200.

When silhouetted against a dark and cloudy sky, this sailing ship's rigging takes on a sinister and claustrophobic atmosphere that seems to tangle the viewer's eye as it tries to make sense of the seemingly impenetrable web of ropes and spars. In fact it's the famous clipper Cutty Sark, a popular tourist attraction located at Greenwich in central London. You can find abstract concepts almost anywhere if you look for them. Shot on a Pentax *ist D with a Pentax-F 28-80mm F3.5-4.5 lens. f/5.6, 1/2000th, ISO 200.





Another example of an arty abstract photo taken on a very humble camera, this shot of the grille of an air conditioning fan was taken in 2002 on an extremely basic 4-megapixel HP PhotoSmart C812 compact. Converted to monochrome and carefully cropped in Photoshop, it's not particularly glamourous or technically impressive, but the simple flat composition of the prosaic and anonymous subject matter does seem to work. Art is what you make it; abstract art doubly so. I should send that in to the Reader's Digest. f/4.8, 1/200th, ISO 100.

Glossary

Abstract photography
A means of depicting a visual image that does not have an immediate association with the real world.

AMOLED
Active-matrix organic light-emitting diode. A new type of display technology used in mobile devices and televisions, and in the monitors of some digital cameras. Has several advantages over LCD, including using less power.

Aperture
Behind the lens of your camera is a movable circular iris which opens and closes to control the amount of light falling on the sensor. This is usually controlled by the light meter, although some cameras have a manual aperture control. Altering the aperture also changes the depth of field.

Aperture priority
This is one of the semi-manual exposure options found on some cameras. The user sets the aperture according to the depth of field they require, and the metering system sets the shutter speed to obtain the correct exposure.

Artefacts
When an image is stored in your camera's memory it has to be compressed to fit, usually into a JPEG file, and in the process some information is inevitably lost. When the image is uncompressed for viewing, noise creeps in and appears as angular blocks in the image, which are known as artefacts.

Autofocus
Almost all digital cameras have automatic focusing. There are essentially two types; contrast detection, used in compact cameras and most CSCs, uses the camera's main sensor and works by detecting the borders between high-contrast areas and trying to make them as sharp as possible. Phase detection AF is used in digital SLRs and some CSCs, and uses a separate sensor. It is usually faster and works better in low light.

AE lock
Auto-exposure lock. A function found on most advanced digital cameras. This enables you to take a light meter reading from a particular part of the image and then hold that setting while you compose the image. Useful for dealing with backlighting and other difficult lighting situations.

Backlighting
Backlighting occurs when your subject is brightly lit from behind, such as somebody standing in front of a sunlit window. Unless you adjust the exposure to compensate for this, your subject will appear as a dark silhouette against the bright background.

Back-side illumination
Not to be confused with backlighting, this refers to a new method of sensor design. In conventional sensors the wires connecting the photocells of the sensor run over the front surface of the chip, reducing the light-collecting area. Back-side chips are made the other way up, so that the wires are on the back. Offers potentially better low-light performance.

Barrel distortion
Barrel distortion occurs when a lens, usually wide-angle, distorts an image so that it appears slightly spherical. If you take a seascape with a wide-angle setting and notice that the horizon seems to curve, this is barrel distortion. It's most noticeable when there are straight lines near the edge of the frame. In digital images barrel distortion can be corrected in image-editing software.

Beauty dish
A beauty dish is a photographic lighting device that uses a parabolic reflector to distribute light towards a focal point.

Bracketing
Bracketing shots is where a photographer takes the same shot three times or more, each at different exposures. This increases the chance of getting an ideally exposed image. Also, it's possible to combine the shots in software to increase the light and shade within the image, which is how HDR works.

Burning
A darkroom process that gives additional exposure to part of the image projected on an enlarger to make that area of the print darker.

Burst mode
Many cameras offer a burst mode, which means they can take several images in rapid succession, just as you'd get with a motor-wind on a traditional film camera. The number of shots that can be taken is limited by the speed of the camera's image capture and processing systems, as well as the size of the internal memory buffer. You'll typically get about three frames per second from a standard digital camera in burst mode.

Camera obscura
A darkened box with a convex lens or aperture for projecting the image of an external object on to a screen inside, a forerunner of the modern camera

Centre-weighted metering
This is when the camera takes an average light reading from the whole frame, but pays more attention to the centre of the image where the subject normally is. This has been largely superseded by multi-pattern metering, which is better able to cope with unusual situations.

CCD
Charge coupled device. This is the light sensor behind the lens of your camera that records the image when you take a photograph. It consists of a grid of millions of tiny light sensors, one for each pixel of the image. The size of a CCD is measured in megapixels, and the higher the megapixel rating, the better the image quality.

Chiaroscuro
Italian for light-dark. The use of bold contrast that defines the shape of the subject and adds a sense of volume. Famed artists such as Caravaggio and Leonardo Da Vinci used this technique.

Chromatic aberration
Coloured fringes that appear around objects, often toward the edges of the frame. Caused by light rays of different

wavelengths coming to focus at different distances from the lens. Better quality lenses seek to minimise this by the use of special coatings and lens designs. Can be corrected by software after the picture is taken.

Contrast
The range of tones visible in an image. These tones range from black and the darkest shadows to the brightest highlights and pure white.

Daguerreotype
The first publicly announced photographic process.

Depth of field
When you focus your camera on a subject, some detail behind and in front of the chosen subject will also be in focus. The distance between the nearest and furthest in-focus objects is known as the depth of field. It is changed by altering the size of the aperture – the smaller the aperture, the larger the depth of field.

Digital zoom
Some cameras give you the option of zooming in on the centre of an image by expanding it in the camera. Although the zoomed area looks bigger, it still contains the same number of pixels as it did originally, so it will appear blocky and will lack resolution. Not to be confused with optical zoom, which is far superior.

Dodging
Holding back the image-forming light from a part of the image projected on an enlarger during part of the basic exposure time to make that area of the image lighter.

Dye-sub printer
A dye-sublimation printer (or dye-sub printer) is a computer printer which employs a printing process that uses heat to transfer dye onto materials

Dynamic range
The difference between the lightest and darkest areas of an image. If a camera can simultaneously capture shadow and highlight detail then it has good dynamic range. Few cameras can do both.

DPI
Dots per inch. The sharpness of an image produced by a printer is defined by how many dots of ink per inch of printed paper its print head can produce. A figure of 1,200dpi or higher is usually required for photographic-quality results, although most modern printers are capable of this.

Effective pixels
Although your digital camera may claim to have 13.6 million pixels on its CCD, some of that number will not be used for taking the picture. Usually, some pixels around the edge of the sensor are painted black to provide a colour balance, while others fall outside the range of the lens.

Electronic viewfinder
Some cameras have a viewfinder containing a miniature LCD monitor showing you what the camera sees. This usually uses less battery power than the LCD screen on the back of the camera, but can be a strain on the eye and difficult to focus.

Exposure
When you take a picture, the light meter in the camera determines how long the shutter should be open for and how wide the aperture should be, thus obtaining the correct exposure. If a picture is too dark, it is underexposed; whereas if it goes the other way and is too light, it is overexposed.

External flash
This means that the camera has a connection, usually a hot shoe, that enables you to use a flashgun other than the one built into the camera. This allows a lot more creative freedom and control over lighting, because the flash can be positioned further away from the camera. This feature is only usually available on more expensive or professional-quality cameras.

EXIF
The Exchangeable Image File (EXIF) format is used by nearly all digital cameras that output pictures as JPEGs. It enables information, such as the GPS co-ordinates, date and time the shot was taken, plus exposure and other camera information, to be stored in the image file alongside the normal picture information.

Fixed focus
Cheaper cameras have fixed-focus lenses, which means they cannot be adjusted. Instead they rely on a very narrow aperture to make everything appear in focus, from a few feet in front of the camera out to infinity. They are fine for snapshots at average distance in good light, but are not so good for creative photographs where focus can be used to produce unusual effects.

Flash
A flash is a device used in photography producing a flash of artificial light (typically 1/1000 to 1/200 of a second) at a colour temperature of about 5500K to help illuminate a scene.

Focal length
In brief, this term describes the magnifying power of the camera's lens. The longer the focal length, the greater the magnification. Conversely, the smaller the focal length, the more wide-angle the lens. Most digital camera zoom lenses can vary between short and long focal lengths.

f-number
This is the number which describes the ratio of the aperture of a camera's lens to its focal length. Generally, a higher quality lens will have a smaller f-number, which bizarrely means a wider maximum aperture, and thus more light entering the lens. See also 'Depth of field' for more information about focusing.

Graduated ND filter
Used typically in landscape photography. Half of the filter is of neutral density which transitions, either abruptly or gradually, into the other half which is clear.

Greyscale
Images of this sort, also known as black-and-white, are composed exclusively of shades of grey, varying from black at the weakest intensity to white at the strongest.

Glossary

HDR
Aw technique whereby several shots at different exposures are combined to produce one image capturing a very wide range of contrast or dynamic range. Useful for high-contrast lighting and night-time shots, but can be over-used by art students who've just discovered it.

High-key lighting
High-key lighting is a style of lighting for film, television, or photography that aims to reduce the lighting ratio present in the scene. It produces images where very little detail is present in highlights and mid-tone areas.

Histogram
A histogram is a graph of brightness. It ranges from black through grey to white along the horizontal axis, while values in the vertical axis represent the number of pixels at the appropriate brightness. It provides a means of checking the exposure of an image. If too many pixels are present at the left-hand side of the histogram, the image is underexposed; while if it's weighted to the right, then it's likely to be overexposed.

Inkjet printing
Inkjet printing is a type of computer printing that recreates a digital image by propelling droplets of ink onto paper.

Interpolation
Some cameras and image-editing software can increase the size of a digital image by adding extra pixels in between the original ones. They take an average of the pixels around the new one and attempt to match the colour and brightness to create a seamless image. Some systems give better results than others.

ISO
International Standards Organisation. In conventional photography, the ISO number is a measure of the light sensitivity of photographic film, and this has been carried over into digital photography as a way of expressing the light sensitivity of the CCD.

Jaggies
Jagged diagonal lines that appear in a low-resolution picture. Pixels are square, so if large pixels are being used to represent a diagonal, you'll be able to see the corners of each, creating a saw-like edge. Anti-aliasing is used to soften jaggies, whereby the software will attempt to calculate 'in-between' shades to blur the line a little and make it look a lot smoother.

JPEG
This file type stands for Joint Photographic Expert Group, and is the most commonly used system of image compression. Using a sliding scale between file size and picture quality, it enables digital cameras and computers to squash a large picture into a small amount of memory. Be careful when compressing files, though, because too much compression will reduce the quality of your image.

Landscape mode
A program exposure option found on many mid-priced cameras, this function automatically selects the best exposure settings for taking landscape photographs, usually a longer shutter speed and the narrowest possible aperture to maximise depth of field. It can also refer to holding the camera horizontally, which is usually preferred for landscape shots.

LCD
Liquid crystal diode. A display technology first developed in the 1970s and in widespread use today. Most cameras have an LCD monitor screen mounted on the back for viewing photographs. Some also have an LCD electronic viewfinder, and some DSLRs also have a separate LCD data display panel.

Light modifier
A piece of equipment or material placed in front of a light source to change the quality of the light emitted. A flash with a large softbox attached is a typical example.

L-ion
Lithium ion. This is the latest kind of rechargeable battery, superior even to Ni-MH. It can hold more power, and does not suffer from 'memory effect', where a partially charged battery, when recharged, will only register the additional charge rather than its full capacity. However, L-ion batteries are quite expensive.

Low-key lighting
High-key lighting is a style of lighting for film, television, or photography that aims to reduce the lighting ratio present in the scene.

Macro mode
Refers to a lens that can focus closer than its designated focal length, but these days it is used to describe any facility for taking extreme close-ups.

Manual mode
Found on higher-end cameras, this is for experienced photographers only. It gives you full control over both aperture and shutter speed, enabling you to experiment with exposure and depth of field. Essential for creative photography.

Megapixel
Megapixels are a measure of the size and resolution of the pictures that a digital camera can produce. Mega means one million, and in this case a million pixels, or more accurately a million individual light sensors on the camera's CCD. The more megapixels, the better.

Memory card
Most digital cameras store your pictures on removable cards full of computer memory. They come in a variety of sizes and there are several different types, including CompactFlash, SD and MicroSD cards, as well as Sony's own Memory Stick format.

Metering system
This is how the camera measures the amount of light being reflected by whatever you are trying to photograph, to determine the correct exposure for that particular scene. There are many different types, including spot metering, multi-pattern metering and centre-weighted metering.

Mid-tone
The mid-range set of tonal values that falls between highlights and shadows.

Monobloc
A monobloc or monolight is a self-contained photographic flash lighting unit usually found in a studio.

Daguerreotype
The first publicly announced photographic process.

photographic-quality results, although most modern printers are capable of this.

Effective pixels

EXIF

Monochrome
Monochrome describes paintings, drawings, or photographs in one colour or values of one colour.

ND filter
The purpose of a standard photographic neutral-density filter is to reduce the amount of light entering the lens.

Night-time mode
A program exposure mode that compensates for low light by setting the aperture to maximum. This lets the most available light into the camera and gives the fastest possible shutter speed under the circumstances.

Optical zoom
With recent advances in lens manufacturing technology, many digital cameras now have small but powerful optical zoom lenses. This means they can be adjusted to magnify the image (zoom in) or to capture a wide-angle shot (zoom out). Because the image uses the full capabilities of the CCD this is preferable to digital zoom.

Panorama
A panorama is any wide-angle view or representation of a location.

Pixel
Abbreviation of 'picture element'. If you enlarge a picture on your computer, you will see that it is made up of tiny squares of a particular colour and brightness called pixels. A pixel is the basic building block of a digital photograph, and there can be several million of them in an image. The higher the pixel count, the better the quality of the photograph.

Polariser
A polariser is an optical filter that passes light of a specific polarisation and blocks waves of other polarisations. Simply put, it can cut down certain reflections in glass or water, for example, to enable you to see the subject.

Portrait mode
This is a program exposure mode that optimises the camera for taking classical portrait shots, widening the aperture to minimise the depth of field. This ensures that only the subject is in focus, while the shutter speed is increased to minimise camera shake.

Prime lens
In photography, a prime lens is a photographic lens whose focal length is fixed, as opposed to a zoom lens.

Processor
All digital cameras have an image processor, which takes the data from the sensor and turns it into the finished JPEG image that you see on the screen. A faster processor means larger resolution images can be processed more quickly, improving the camera's performance.

Program exposure
Found on most digital cameras, program exposure is an automatic setting where the camera's metering system selects an appropriate aperture setting and shutter speed in an attempt to get the best exposure and performance out of the lens.

Raw
Raw mode is found on most high-end digital cameras. It is an option which stores the uncompressed raw data from the sensor, which can then be processed on a computer using software such as Adobe Camera Raw, Bibble etc. Raw files contain more information than JPEGs, and take up more memory. Raw is actually not an acronym and so shouldn't be all capitals; it should really be written simply as "raw".

Resolution
The more pixels there are in an image, the sharper that image will be. This is the resolution of the picture, and is usually expressed as two numbers representing the height and width of the image in pixels, such as 3,872 x 2,592. Multiplying these two figures gives you the effective megapixels, in this case 10.03MP.

Sepia
Sepia tones are used in photography. The hue resembles the effect of aging in old photographs.

Shutter
The shutter is a device behind the lens of the camera which is normally closed, but opens for an instant when a picture is taken to allow light into the camera and onto the CCD. The length of time for which the shutter is open is determined by the metering system, and is known as the shutter speed.

Shutter priority
This is a semi-manual mode that enables the photographer to specify a shutter speed while the camera's metering system sets the aperture for the correct exposure.

SLR
Single-lens reflex. A mirror or prism reflects the light coming in through the lens to the viewfinder, so when you look through it you see exactly what the camera can see.

Spot metering
Found on the more expensive cameras, this metering mode enables the photographer to take a light reading from a small area in the middle of the frame, usually marked in the viewfinder. This is the best way of dealing with difficult lighting conditions such as backlighting, and is normally used in conjunction with auto-exposure lock.

Vignette
Vignetting is the softening or shading away of the edges of a subject in an image.

White balance
Most modern digital cameras automatically adjust the colour balance of the picture to compensate for any tints in the ambient light - such as sunlight, fluorescent strip lights or normal lightbulbs. This is called a white balance, and means you can take a picture indoors without that orange tint you get with a film camera.

Zone System
Developed and mastered by Ansel Adams, there are 10 zones, ranging from black (Zone 1) to white (Zone 10).

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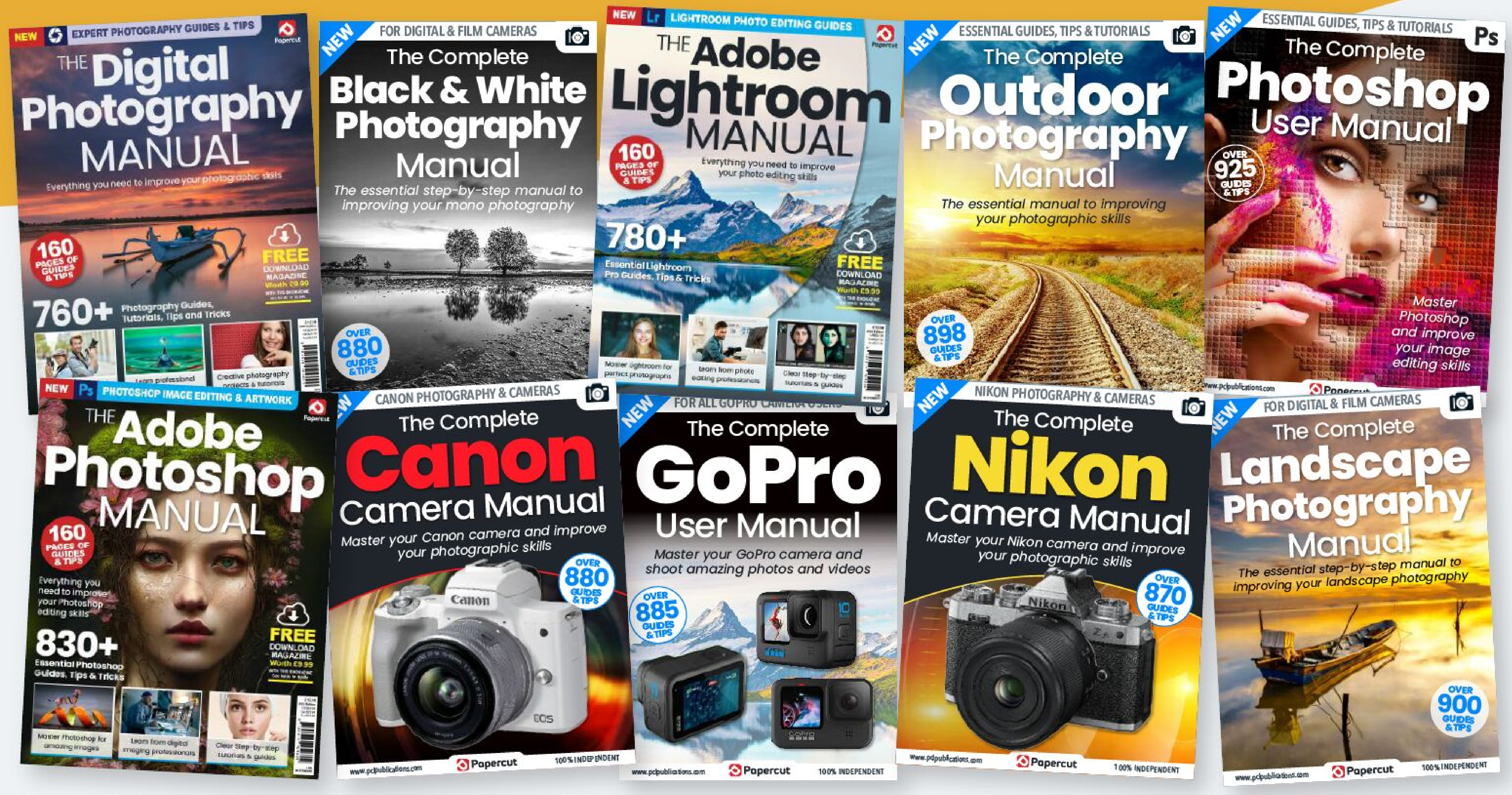

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